FILED UNDER SEAL

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION

THE STATE OF TEXAS, et al., Plaintiffs, v. GOOGLE LLC, Defendant.	Civil Action No. 4:20-cv-00957-SDJ

EXHIBIT 13

PLAINTIFF STATES' OPENING BRIEF TO THE SPECIAL MASTER
<u>FOR THE FEBRUARY 22, 2024 HEARING</u>

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE GOOGLE DIGITAL ADVERTISING ANTITRUST LITIGATION	1:21-md-03010 (PKC)

PLAINTIFFS' FIRST SET OF REQUESTS FOR
PRODUCTION OF DOCUMENTS TO DEFENDANTS

Pursuant to Fed. R. Civ. P. 26 and 34, Plaintiffs in the above-captioned matter request that Defendants Google LLC, Alphabet Inc., and YouTube, LLC ("Defendants") serve a written response to this First Set of Requests for Production and produce for inspection and copying the documents and other materials requested below that are in their possession, custody, or control, or in the possession, custody, or control of their attorneys, accountants, and any person(s) acting on their behalf within 30 days.

DEFINITIONS

The definitions and rules of construction set forth in Rules 26 and 34 of the Federal Rules of Civil Procedure and Local Civil Rule 26.3 for the Southern District of New York are hereby incorporated and apply to this request for the production of documents and other materials. The incorporated definitions apply without regard to capitalization of these terms in the Specific Requests. Plaintiffs reserve the right to serve additional requests for the production of documents and other materials.

1.   "Ad Auction" shall mean any auction to sell Ad Inventory.

2.   "Ad Impression" shall mean a specific advertising opportunity in a specific ad space on a Publisher's website that can be sold to an Advertiser.

3.   "Ad Inventory" shall mean the range of potential Ad Impressions a Publisher has available to sell on its webpages when Users load the webpages.

4.   "Ad Request" shall mean an electronic message sent from a Publisher's web page to a Publisher Ad Server, requesting the Publisher Ad Server prepare Bid Requests soliciting advertising content from SSPs, Ad Exchanges, or Ad Networks for insertion or incorporation into a web page. An Ad Request may be directed to a portion or the entirety of a web page.

5.   "Ad Tech Auction Mechanics" shall mean any and all systems and software that implement, effectuate, or modify any Ad Auction rules, preferences, designs, or features; this term includes Open Bidding (also known as "Exchange Bidding," "Jedi," "Jedi+," "Jedi++," or "Demand Syndication"), Open Auction, Dynamic Allocation, Enhanced Dynamic Allocation, Optimized Competition, Real-Time Bidding, OpenRTB, Unified Pricing Rules, First Look, Last Look, Reserve Price Optimization, Dynamic Revenue Share (also known as "Average Revenue Share"), Project Bernanke, Project Poirot, Project Elmo, or Minimum Bid to Win.

6.   "Ad Tech Products" shall mean any and all systems, platforms, and software, including predecessors and successors, used in the process of identifying, selecting, transmitting, and/or rendering Digital Advertising on a desktop or mobile device, as well as all systems and software, including predecessors and successors, that implement and/or effectuate an Ad Auction, including receiving, processing, and transmitting Bid Requests, Bid Responses, or related messages. The term includes Publisher Ad Servers, Advertiser Ad Servers, SSPs, DSPs, Demand-Side Products, Ad Exchanges, and Ad Networks, and specifically includes Your products: Your Publisher Ad Server (formerly called "DoubleClick for Publishers" or "DFP"); Your Ad Exchange (formerly called DoubleClick Ad Exchange" or "AdX"), Google Ads (formerly called "Google AdWords" or "AdWords"), Display & Video 360 (DV360), DoubleClick Bid Manager (DBM) (also known as "Google Bid Manager"), Campaign Manager, DoubleClick Campaign Manager (DCM), Google Display Network (GDN), Google Ad Manager (GAM), DoubleClick for Publishers (DFP), Google AdSense (also known as "AdSense for Content" and "AFC"), DoubleClick for Advertisers (DFA), Google Analytics, Google AdMob, Search Ads 360 (SA360), Google Search Network, and any other product or service, however

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named, that You provide, have provided, or will provide for the sale or intermediation of Digital

Advertising, including all predecessors and successors of such Ad Tech Products.

7.   "Advertiser" shall mean anyone who buys, bids, or otherwise attempts to buy Ad

Inventory on a third-party webpage or mobile application to serve ads to Users who visit a third-

party webpage or mobile application.

8.   "Algorithm" shall mean any process, set of rules, source code, or white paper

describing or concerning the operation of Your Ad Tech Products or search engine.

9.   "AMP Page" shall mean a webpage designed and served as an accelerated mobile

page, as described on the domain https://amp.dev/.

10.   "Analysis" shall mean any analyses, evaluations, or interpretations of Your

Metrics, financial performance, expenses, or revenues. It also includes any analyses, evaluations,

or interpretations of the Metrics, financial performance, expenses, or revenues of third parties,

such as Advertisers, Competitors, and Publishers.

11.   "API" shall mean application programming interface.

12.   "Attribution Model" shall mean the rule or rules that determine how a purchase is

credited or attributed to an ad.

13.   "Authorized Buyer" shall mean a buyer participating in Your Authorized Buyers

program. *See* https://support.google.com/authorizedbuyers/answer/6138000?hl=en.[1]

14.   "Behavioral Data" shall mean all types of data collected regarding user

preferences, statuses, and behaviors, regardless of whether acquired directly from the User

("First-Party Data") or indirectly ("Second-Party Data" or "Third-Party Data"). Behavioral Data

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[1] All web address hyperlinks that appear in these Requests were last visited on January 27, 2023.

includes demographic information, device identification, browser identification, location

information, browsing history, and session length.

15.   "Bid Request" shall mean an electronic message containing (directly or indirectly)

information about the context of a piece of Ad Inventory (page content, URL, etc.) and the User

(*e.g.*, cookie data) that can be used to solicit bids to purchase an Ad Impression, irrespective of

whether the message or its contents has been modified for transmission to an Advertiser.

16.   "Bid Response" shall mean an electronic message generated in response to a Bid

Request containing (directly or indirectly) a bid price and various pieces of information

concerning proposed advertising content to fill an Ad Impression identified in the corresponding

Bid Request.

17.   "Clone" shall mean an exact copy of a document, Source Code Repository, or

wiki, including all commits, comments, versions, and revision history, if any. *See*

https://help.github.com/en/github/getting-started-with-github/github-glossary#clone. Please note

the instruction above, which requires any responsive dynamic material (*e.g.*, a wiki or repository)

to be produced in electronic format as a Clone of such material, including all comments,

versions, commits, revision history, and material from any associated information tracking

systems, including feature requests, bug reports, issues, sprints, tasks, user stories, project

management, and trouble tickets.

18.   "Competitors" shall mean any entity that offers any products or services that

competes or has competed with Your Ad Tech Products or Ad Tech Services.

19.   "Core Algorithm Update" includes "core updates" as described by You at

https://developers.google.com/search/updates/core-updates, and all other algorithmic changes

and updates You employ to implement Your Core Algorithm Updates.

20.   "Core Web Vitals" shall have the same meaning You provide at

https://support.google.com/webmasters/answer/9205520?hl=en.

21.   "Cost-Per-Click" or "CPC" shall mean that method of payment by which

Advertisers pay a certain amount of money each time a User clicks on ad space filled by that

Advertiser.

22.   "Cost-Per-Mille" or "CPM" shall mean that method of payment by which

Advertisers pay, or Publishers receive, a certain amount of money for every thousand Ad

Impressions that occur in a given ad space.

23.   "Daily Mail" shall mean Associated Newspapers Ltd., Mail Media, Inc., and all

persons or entities acting or that have acted on their behalf, including divisions, subsidiaries,

holding companies, parents, successors, predecessors, and any other related entity as well as

their officers, directors, trustees, present and former employees, agents, affiliates, joint ventures,

partners, assigns, or any other representatives or other persons under their control.

24.   "Demand-Side Products" shall mean Your Ad Tech Products that facilitate the

purchase of Ad Inventory, including AdWords, Google Ads, DoubleClick for Advertisers,

Google Display Network, DoubleClick Campaign Manager, Google Campaign Manager,

DoubleClick Bid Manager, DV360, Google Analytics, Analytics 360, and Google Audience

Center.

25.   "Direct Action Plaintiff" shall mean any Plaintiff (not including Daily Mail as

defined) in any matter that is now or becomes a part of *In re Google Digital Advertising*

Antitrust Litigation, 1:21-md-03010 (PKC) (S.D.N.Y.), that is proceeding in its or their

individual capacity, and all persons or entities acting or that have acted on its or their behalf,

including divisions, subsidiaries, holding companies, parents, successors, predecessors, and any

other related entity as well as their officers, directors, trustees, present and former employees,

agents, affiliates, joint ventures, partners, assigns, or any other representatives or other persons

under their control.

26.   "Direct Sales" shall mean Ad Inventory that is sold by a Publisher without the use

of open programmatic auctions, but including programmatic guaranteed line items managed by

the Publisher, directly to Advertisers.

27.   "Digital Advertising" shall mean advertising inventory filled by way of the

internet, as opposed to out-of-home, broadcast television, or print, including video Digital

Advertising, display (desktop and mobile) Digital Advertising, search Digital Advertising, in-app

Digital Advertising, native Digital Advertising, rich media Digital Advertising and any other

advertising categorized as Digital Advertising by You in Your ordinary course of business.

28.   "EAT" or "EEAT" shall mean "expertise, authoritativeness, and trustworthiness,"

or "experience, expertise, authoritativeness, and trustworthiness," as described by You at

https://developers.google.com/search/blog/2022/12/google-raters-guidelines-e-e-a-t and

https://blog.google/products/search/overview-our-rater-guidelines-search/.

29.   "Facebook's Search Engine" shall mean a search engine within Facebook that

was often referred to as Graph Search.

30.   "First Look" shall mean the feature of Google Ad Manager described on

https://support.google.com/admanager/topic/9242064, including any equivalent features in other

Google Ad Tech Products.

31.   "GDN Referrer Data" shall mean the "raw GDN Referrer Data" described in

United States v. Google LLC, No. 20-cv-03010 (D.D.C.), ECF No. 352, at 26-28.

32.   "Google Group" shall have the meaning of the term as used on the webpage

https://support.google.com/a/answer/33329, including email distribution lists, collaborative

inboxes, and Q&A forums. The term "Google Group" shall include any computer account that

can be assigned or has been assigned access rights for a computer resource, has been assigned an

email address, and/or can serve as a proxy or an alias for a collection of one or more other

computer accounts. Exhibit A includes a list of Google Groups that are identified by their aliases.

33.   "Google Publisher Tag" shall have the same meaning as found at

https://developers.google.com/doubleclick-gpt/.

34.   "Human Reviewers" shall mean those natural persons or entities You employ,

contract with, or otherwise use to evaluate Your search results, as described by You at

https://blog.google/products/search/raters-experiments-improve-google-search/ and

https://static.googleusercontent.com/media/guidelines.raterhub.com/en//searchqualityevaluatorgu

idelines.pdf, those natural persons or entities You employ, contract with, or otherwise use to

assess, ascribe, evaluate, or otherwise determine "Sensitive Categories" and "Digital Content

Labels," as defined by you at https://support.google.com/displayvideo/answer/6327207?hl=en

and https://support.google.com/displayvideo/answer/2735881, or those natural persons or entities

You employ, contract with, or otherwise use to assess, ascribe, evaluate, or otherwise determine

Policy Issues. Human Reviewers includes natural persons and entities affiliated with the

following domains: Appen.com, Raterhub.com, Lionbridge, and Leapforce.

35.   "Includes" shall mean "includes, but not limited to"; and "including" shall mean

"including without limitation."

36.   "Last Touch Attribution" shall mean those types of Attribution Models whereby

credit for a consumer's purchase is assigned based on the consumer's last point of contact.

37.   "Links Reports" shall mean the reports described at

https://support.google.com/webmasters/answer/9049606?hl=en, and all data and information

included in and derivable from those reports, including all data and information regarding

backlinks.

38.   "Metric" shall mean any measures of quantitative assessment that may be used for

analyzing, evaluating, or interpreting Your business, Your budgets, Your financial performance,

Your revenues, or Your Projections, including the following: cost per mille (CPM), revenue per

mille (RPM), cost per click (CPC) cost per impression, average advertiser yield, monthly active

users (MAU), revenue split, total advertising revenue, take rate, transaction fees, total ad

impressions, number of impressions, and/or daily active users (DAU). Metric also includes any

measures of quantitative assessment that may be used for analyzing, evaluating, or interpreting

the business, budgets, financial performance, revenues, or Projections relating to third parties

(*e.g.*, Advertisers, Competitors, and Publishers), including the following: cost per mille (CPM),

revenue per mille (RPM), cost per click (CPC) cost per impression, average advertiser yield,

monthly active users (MAU), revenue split, total advertising revenue, take rate, transaction fees,

total ad impressions, number of impressions, and/or daily active users (DAU).

39.   "Mobile Usability" shall have the same meaning You provide at

https://developers.google.com/search/docs/crawling-indexing/mobile/mobile-sites-mobile-first-indexing.

40.   "Network Effect" shall mean the phenomenon whereby a service improves across

viewer engagement Metrics because the number of users or content increases.

41.   "NewsGuard" shall mean NewsGuard Technologies, Inc. and all persons or

entities acting or that have acted on their behalf, including divisions, subsidiaries, holding

companies, parents, successors, predecessors, and any other related entity as well as their

officers, directors, trustees, present and former employees, agents, affiliates, joint ventures,

partners, assigns, or any other representatives or other persons under their control.

42.   "Page Experience" shall have the same meaning You provide at

https://developers.google.com/search/docs/appearance/page-experience.

43.   "Policy Issues" shall have the same meaning You provide at

https://support.google.com/admanager/answer/11117554?hl=en&ref_topic=11121694.

44.   "Projections" shall mean any forecasts or evaluations of Your or a third parties'

(*e.g.*, Advertisers, Competitors, Publishers) future or predicted Metrics, financial performance,

expenses, or revenues.

45.   "Publisher" shall mean anyone who serves content on the internet that is

monetized by selling Ad Inventory to Advertisers.

46.   "Real-Time Bidding" or "RTB" shall mean that process by which Advertisers

submit bids for Ad Impressions in real-time Ad Auctions.

47.   "RPM" or "Revenue Per Mille" shall mean "the estimated earnings you'd accrue

for every 1000 impressions you receive."

https://support.google.com/adsense/answer/190515?hl=en

48.   "RTC" or "Realtime Config" shall mean that feature of AMP that enables

Publishers to call up to five other servers for each piece of Ad Inventory. *See*

https://github.com/ampproject/amphtml/blob/master/extensions/amp-a4a/rtc-documentation.md.

49.   "Source Code" shall mean human-readable instructions written in a language that

can be executed by a computer. The term "Source Code" includes instructions that can be

understood by an interpreter as well as instructions that must first be compiled or assembled

prior to execution by a computer. The term "Source Code" further includes any associated files, including comments, read me files, and change logs, without regard to whether these files can be executed.

50.   "Source Code Repository" shall mean a file archive, web hosting facility, or platform for the storage, development, and version control of Source Code, including associated documentation, web pages, and other works. This term includes GitHub, SVN, Google Code, and SourceForge. This term also includes all associated branches, forks, and submodules of each said repository.

51.   "User" shall mean the person who is viewing a web page and to whom an Ad Impression may be displayed through use of Your Ad Tech Products and/or Ad Tech Services.

52.   "You", "Your", "Alphabet", or "Google" shall mean Defendants Google LLC, Alphabet Inc., and YouTube, LLC ("Defendants") and their past and present officers, employees, agents and representatives, parents and predecessors, divisions, subsidiaries, affiliates, partnerships and joint ventures. The terms "subsidiary," "affiliate," and "joint venture" refer to any firm in which there is total or partial ownership of twenty-five percent or more or total or partial control between the company and any other Person or entity.

53.   The terms "and," "or," "and/or," "concerning," "communication," "document," "identify," "person," "any," "all," and "each," are defined as set forth in Rule 26.3 of the Local Rules of the United States District Court for the Southern District of New York.

54.   The definitions set forth above shall apply to all requests. Capitalized terms not defined herein shall have the definitions set forth in the most recent complaints (and any subsequently filed complaints or amended complaints) in *In re: Google Digital Advertising Antitrust Litigation*, 1:21-md-03010-PKC, ECF Nos. 195 (States Complaint), 399 (Advertiser

Class Complaint), 400 (Daily Mail Complaint), 401 (Direct Action Newspapers Complaint) and

408 (Publisher Class Complaint).

55.   Any reference to Your Ad Tech Products or Your Ad Tech Auction Mechanics,

individually or collectively, also shall include any successor or predecessor Ad Tech Products or

Ad Tech Auction Mechanics having the same or similar functionality.

INSTRUCTIONS

1.   Please produce the Documents responsive to the numbered requests below that

are in Your possession, custody, and/or control, including Documents in the possession of Your

attorneys, accountants, consultants, or other agents.

2.   The terms defined above and the individual requests for production and inspection

are to be construed broadly to the fullest extent of their meaning in a good faith effort to comply

with the Federal Rules of Civil Procedure.

3.   All Documents are to be produced in full. If any part of a document is responsive

to any request, the whole document is to be produced. Non-responsive portions of otherwise

responsive Documents may not be redacted.

4.   Any alteration of a responsive document, including notes, underlining, stamps,

drafts, revisions, modifications and other versions of a final document, is a separate document

and is to be produced as a separate document.

5.   If you file a timely objection to any portion of a request, definition, or instruction,

please produce Documents responsive to the remaining portion.

6.   If any document is withheld, in whole or in part, for any reason, including any

claim of privilege of any kind, work-product protection, trade secret, or confidentiality, You

shall provide with respect to each such document all information required to be furnished by Fed.

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R. Civ. P. 26(b)(5), the Local Rules of the United States District Court for the Southern District

of New York, and any Order in this case, including any Order regarding Electronically Stored

Information ("ESI"). To the extent that any parent Documents and/or attachments to parent

Documents are withheld on the basis of any privilege or confidentiality claim, notwithstanding

Instruction No. 3, such parent document and any attachments withheld should be separately

identified on a log or list pursuant to this paragraph with information sufficient to identify

familial relationships between the family of Documents. Any privilege log or list is to be

produced in an Excel spreadsheet or other format capable of electronic sorting with Your

response or as otherwise ordered by the Court.

   7. Any purportedly privileged document containing non-privileged material must be

produced, redacting only the portion purportedly privileged.

   8. Pursuant to Federal Rules of Civil Procedure 34(b), all electronically stored

information is to be produced in native format (including metadata) whenever possible.

   9. Any responsive dynamic material (*e.g.*, a wiki or repository) should be produced

in electronic format as a Clone of such material, including all comments, versions, commits,

revision history, and material from any associated information tracking systems, including

feature requests, bug reports, issues, sprints, tasks, user stories, project management, and trouble

tickets.

   10. Unless otherwise stated, the Requests seek Documents from January 1, 2007 to

the present (the "Relevant Time Period"). Because these requests are ongoing, please promptly

produce any document discovered or obtained after the service of these requests.

11.   If any document responsive to the request cannot be located, please describe with particularity the efforts made to locate the document and the specific reason for its destruction or unavailability.

SPECIFIC REQUESTS FOR DOCUMENTS

RELEVANT MARKETS

1.   Documents analyzing, describing, evaluating or studying the U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Networks, Ad Buying Tools for Large Advertisers, Ad Buying Tools for Small Advertisers, General Search Services, and Online Search Advertising.

2.   Documents sufficient to show the size of the U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Networks, Ad Buying Tools for Large Advertisers, Ad Buying Tools for Small Advertisers, General Search Services, and Online Search Advertising on a quarterly and yearly basis by each Metric You use.

3.   Documents sufficient to show (a) Your share and (b) Your competitors' share of the U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Networks, Ad Buying Tools for Large Advertisers, Ad Buying Tools for Small Advertisers, General Search Services and Online Search Advertising on a monthly, quarterly, and yearly basis by each Metric You use.

4.   All Documents analyzing, evaluating, or studying products and/or services that You considered to be substitutes for, or reasonably interchangeable with, Your products and/or services in the U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Networks, Ad Buying Tools for Large Advertisers, Ad Buying Tools for Small Advertisers, General Search Services and Online Search Advertising, including Documents sufficient to show all such products and/or services.

5.   All Documents concerning any analysis, evaluation, or study of barriers to entry

or expansion faced by any other company that offers or offered, or which potentially may offer

or have offered, any product or service in competition with any of Your Ad Tech Products to the

U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Networks, Ad Buying Tools for Large

Advertisers, Ad Buying Tools for Small Advertisers, General Search Services and Online Search

Advertising, including Documents sufficient to show all barriers to entry to those markets. For

purpose of this Request, "barriers" includes switching costs, default biases, information or data

asymmetries, and access to inputs or customers.

6.   All Documents analyzing, evaluating or studying actual or potential competitive

threats (or lack thereof) to Your products and/or services in the U.S. markets for Publisher Ad

Servers, Ad Exchanges, Ad Networks, Ad Buying Tools for Large Advertisers, Ad Buying Tools

for Small Advertisers, General Search Services and Online Search Advertising, including

Documents sufficient to identify Your competitors and potential competitors, and their respective

products and/or services.

7.   All Documents analyzing, evaluating, or studying any actual or potential effect on

the prices and/or quality of Your products and/or services in the U.S. markets for Publisher Ad

Servers, Ad Exchanges, Ad Networks, Ad Buying Tools for Large Advertisers, Ad Buying Tools

for Small Advertisers, General Search Services and Online Search Advertising, due to actual or

potential competition from possible substitute products and/or services.

8.   All Documents concerning, analyzing, evaluating, researching, or studying, any

direct or indirect network effects between Your Advertiser-facing Ad Tech Products and Your

Publisher-facing Ad Tech Products in the U.S. market for Publisher Ad Servers, Ad Exchanges,

Ad Networks, Ad Buying Tools for Large Advertisers, Ad Buying Tools for Small Advertisers, and Online Search Advertising.

9.   All Documents concerning customers who stopped using Your Ad Server, Ad Exchanges, Ad Networks, Ad Buying Tools for Large Advertisers, Ad Buying Tools for Small Advertisers, and Online Search Advertising, including why customers stopped use including any and all complaints regarding the same; what, if any product or service the customer switched to; what, if any, response You considered or undertook, and all Documents concerning any alternative products and/or services from which Your products and/or services have won customers.

10.   All Documents and Communications, including white papers, market analyses, competitive analyses, strategic plans, and other decision-making Documents, regarding Your share of the General Search Services market, since December 16, 2016.

RELEVANT ACQUISITIONS

11.   All Documents concerning Your acquisition of DoubleClick, including planning Documents, white papers, market analyses, competitive analyses, merger retrospectives, strategic plans or other decision-making and analytical Documents, as well as Documents you submitted to regulators, including the United States Department of Justice ("DOJ"), the Federal Trade Commission ("FTC"), and the United States Securities and Exchange Commission ("SEC") concerning Your acquisition of DoubleClick. The time period applicable to this request is January 1, 2007 to January 1, 2010.

12.   All Documents concerning Your acquisition of AdMeld, including planning Documents, white papers, market analyses, competitive analyses, merger retrospectives, strategic plans or other decision-making and analytical Documents, as well as Documents you

submitted to regulators, including to DOJ, FTC, and SEC concerning Your acquisition of AdMeld. The time period applicable to this request is January 1, 2010 to December 31, 2012.

13.   All Documents concerning Your acquisition of Invite Media, including planning Documents, white papers, market analyses, competitive analyses, merger retrospectives, strategic plans or other decision-making and analytical Documents, as well as Documents you submitted to regulators, including to DOJ, FTC, and SEC concerning Your acquisition of Invite Media. The time period applicable to this request is January 1, 2009 to December 31, 2012.

CORPORATE ORGANIZATION

14.   Documents, such as organizational charts, sufficient to show corporate organization or structure for each of Your Ad Tech Products businesses on an annual basis, including the specific entities involved and each person that has managerial responsibilities for the specific entities.

AD TECH BUSINESSES

15.   All Documents concerning Your design of buying and selling processes for display advertising in Your Ad Tech Products, including the considerations and reasoning behind Your choices for the design of such processes for sales and auctions as well as all design documents, UI mockups, launch scope documents, impact assessments, revenue impact analyses using the Rasta impact stage, review of properties affected, launch review dates, and statistics from Rasta, REMH, and Human Evaluations for each interim experiment used to issue an update to an Ad Tech Product in the form of hold-back experiments in Rasta, progressive launch experiments by geography or by user groups, including launches in Ariane, and any additional quantitative analyses or other documents showing the measured impact of an implemented change.

16.   All Documents concerning the policies and practices applicable to "Authorized Buyers," quantifying or explaining the potential or actual impact of those policies and practices, and identifying those parties designated or treated as "Authorized Buyers."

17.   All Documents concerning the policies and practices applicable to "strategic publishers," quantifying or explaining the potential or actual impact of those policies and practices, and identifying those parties designated or treated as "strategic publishers."

18.   All Documents concerning the policies and practices applicable to "preferred deals," "programmatic guaranteed," "whitelisting" and "private auctions" quantifying or explaining the potential or actual impact of those policies and practices, and explaining which transactions were designated or treated as "preferred deals."

19.   All Documents, including manuals, instructions, or rulebooks, provided to publishers, advertiser, or any other third party, concerning each of your Ad Tech Products.

20.   Documents sufficient to identify all customers of Your Ad Tech Products, including Documents sufficient to show a list of the top 1,000 advertisers in each year using Google Ads or its predecessor or using DV360 or its predecessor, and, for each of these Advertisers, Documents sufficient to show:

        a.   their share of ad spend on search and display monthly since 2007;

        b.   the monthly share of AdX vs other exchanges of display ad spend in Google Ads and DV360; and

        c.   the monthly share of ads served by DFP vs other ad servers of display ad spend in Google Ads and DV360.

21.   Documents sufficient to show the monthly share of impressions and revenue served by DFP or transacted through AdX, as well as the monthly share of impressions

transacted by and revenue for any other Publisher Ad Server, Ad Exchange, or Ad Network or through Header Bidding.

22.   Documents sufficient to show the monthly share of Google Ads and DV360 ad spend transacted by AdX, as well as, the monthly share of Google Ads and DV360 ad spend on other exchanges.

23.   Documents sufficient to show the data used by Google Ads' Machine Learning models to achieve the targeting goals of an Advertiser by Metric.

24.   All Documents concerning Your process of modifying a winning AdX bid from a second-price auction to compete in a subsequent first-price auction (such as in Open Bidding).

25.   All Documents, including any Documents from Your Rasta database, evaluating, discussing, or comprising all experiments, tests, analyses, predictions, designs, simulations, query results, data maps, data descriptions, data dictionaries, and other considerations for feature changes to GAM, DFP, and AdX, including Your development and implementation of:

      a.   Your decision to offer DFP Small Business to Publishers for free and any plans to monetize the same

      b.   Your decision to impose a minimum ad spend for AdX and Your decision to only consider ad spend that is purchased through DBM to satisfy the minimum requirements for AdX.

      c.   Dynamic Allocation, including the average effective CPM under DA compared to directly sold inventory booked in DFP as well as any Documents, offline experiments or auction simulations, online experiments and statistics from Rasta, hold-back experiments run on live traffic via Rasta, launches through Ariane, and live user testing, as

documented via Human Evaluations or other means, that measured the impact of Dynamic

Allocation;

d. restricting non-Google Ad Exchanges' ability to access Dynamic

Allocation;

e. Your decision to allow AdX to outbid non-Google Ad Exchanges after

they submitted their bids, as well as Your decision to discontinue this conduct, if such a

decision was taken;

f. Last Look effects prior to, during, and after the launch of Dynamic

Allocation;

g. Enhanced Dynamic Allocation ("EDA"), including any Documents,

offline experiments or auction simulations, online experiments and statistics from Rasta, hold-

back experiments run on live traffic via Rasta, launches through Ariane, and live user testing, as

documented via Human Evaluations or other means, on each version of EDA prior to, during, or

after launch on AdX;

h. The impact and/or any effects of EDA on non-AdX Exchanges, on the

share of Ad Inventory sold by Publishers through Direct Sales, on the timing of Ad Inventory

sold by Publishers through Direct Sales, on the value of Publishers' inventory sold through

Direct Sales; on allocation of Advertisers' ad spend between Direct Sales and programmatic

sales; and/or on the loss to Publishers of the opportunity to gain additional ad spend absent

EDA;

i. Projects Elmo and Poirot, including experiments or other quantitative

analyses that measure or evaluate the effects of each version of Project Poirot and Project Elmo

prior to, during, and after launch. This material includes any offline experiments or auction

simulations, online experiments and statistics from Rasta, hold-back experiments run on live

traffic via Rasta, launches through Ariane, and live user testing, as documented via Human

Evaluations or other means, that measured revenue on AdX and DV360, quantity of

transactions on AdX, share of bids from DV360 transacted through AdX, or on Publishers',

Advertisers', and rival exchanges' revenues and transaction rates or win rates; the cookie data

used by Project Elmo to select competing intermediaries to which to send bids;

   j. Your decision not to support the option for Publishers to use Header

Bidding in GAM, DFP, or Open Bidding, and to prohibit AdX or GAM from returning bids

through Header Bidding;

   k. Your decision to charge a fee to Ad Exchanges who participated in Open

Bidding or Exchange Bidding;

   l. Minimum Bid to Win;

   m. Unified Pricing Rules; and

   n. Unified Auction, including beta results.

 26. Documents, including product roadmaps, API documentation, simplified API,

interface specification, interface documentation, code documentation, product architecture

schematics, and presentations (i) that detail or address the specifications, API documentation,

and descriptions of the data transferred or communicated between the following, and/or (ii) that

detail or address the functionality and interactions between the following:

   a. DFP and AdX, including the underlying data exchanged under the DEP

  DataTransfer release;

   b. the Ad Server functionality of GAM and the Ad Exchange functionality of

GAM;

c.   non-Google Publisher Ad Servers and AdX;

d.   non-Google SSPs and AdX;

e.   non-Google Ad Exchanges and DFP or GAM;

f.   AdSense and AdX or DFP or GAM;

g.   non-Google Ad Exchanges or Publisher Ad Servers and AdSense;

h.   Google Ads and AdX or DFP or GAM;

i.   non-Google DSPs and AdX or DFP or GAM;

j.   non-Google Ad Exchanges and Google Ads;

k.   non-Google Publisher Ad Servers and Google Ads;

l.   DV360 and AdX or DFP or GAM;

m.   non-Google Ad Exchanges and DV360;

n.   SA360 and DFP or GAM;

o.   non-Google Publisher Ad Servers and SA360;

p.   AdSense and Google Ads;

q.   non-Google DSPs and AdSense;

r.   Google Marketing Platform (formerly DoubleClick Digital Marketing and

Google Analytics 360 Suite) and AdX or DFP or GAM;

s.   non-Google Ad Exchanges and Google Marketing Platform (formerly

DoubleClick Digital Marketing and Google Analytics 360 Suite);

t.   non-Google advertising analytics tools and AdX or DFP or GAM;

u.   Google Chrome and Google Ads or DV360;

v.   non-Google DSPs and Chrome;

w.   Google Chrome and AdX or DFP or GAM; and

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x.   non-Google Ad Exchanges or Publisher Ad Servers and Chrome.

27.   Documents that discuss or otherwise relate to analysis of, measurement of, or decisions related to:

a.   the availability of the Google Display Network on non-Google Ad Exchanges;

b.   the availability of the Google Display Network on non-Google DSPs; and

c.   Google Ads' ability or inability to interface with non-Google Ad Exchanges.

28.   Documents containing or discussing any measurement, analysis, or consideration concerning any of the following:

a.   considered or actual changes to User profiles, super profiles, and other ad targeting criteria used;

b.   considered or actual changes to conventions or protocols for data sharing with Advertisers and Publishers, including bid data transfer files, and results, output, or impressions data;

c.   considered or actual changes to the interoperability of Your Ad Tech Products with any non-Google Ad Tech Products;

d.   considered or actual changes to the configuration options available to Publishers in GAM, DFP or AdX;

e.   considered or actual changes to AdX's auction latency requirements;

f.   Google Display Network's Fourth-Party Call restrictions (*see* https://support.google.com/adspolicy/answer/94230?hl=en);

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g.   considered or actual changes to Google's policy restricting Advertisers' use of third-party data on Google Search, Gmail, and YouTube;

h.   Your decision to not provide access to DoubleClick ID log-level data;

i.   Google Chrome's treatment of or policies toward Third-Party cookies; and

j.   Your policies or conduct in sharing contextual user data (such as the categories of websites visited by users) via AdX or GAM with Advertisers.

29.   To the extent You have considered selling (or otherwise divesting) or received any offer, formal or informal, to purchase (or otherwise acquire) any portion of Your business relating to GAM, produce all Documents concerning any such considerations, offer(s), and negotiations, including all related internal and external communications.

HEADER BIDDING AND EXCHANGE/OPEN BIDDING

30.   All Documents concerning Your policies concerning multiple Bid Requests for a single Ad Impression, including any drafts, proposals, or correspondence relating to any changes made to Your multi-call polices.

31.   All Documents concerning any of Your internal operations groups, employee groups, investigative teams, or task forces which have studied or examined (or are studying or examining) the effects of Header Bidding on any aspect of Your business, including Documents that relate to the establishment, operation of, and conclusions drawn by Your Header Bidding Observatory Team and Documents studying, evaluating, or analyzing competitive threats to Your Ad Tech Products posed by Header Bidding.

32.   All Documents studying, evaluating, or analyzing Header Bidding's impact on winning prices paid by Advertisers and/or received by Publishers for impressions and take rates charged by ad exchanges.

33.   All Documents studying, evaluating, or analyzing the implementation of Header

Bidding by Publishers, including monthly data regarding the share of Publishers by Publisher

type (*e.g.*, LPS) using header bidding tags.

34.   All Documents concerning any latency studies done by You or in Your possession

with respect to Header Bidding, including Documents that relate to asynchronous

implementation of Header Bidding.

35.   All Documents concerning any marketing materials, materials relating to publicity

campaigns, and material You provide to any of Your sales teams regarding Header Bidding.

36.   All Documents concerning Your response to Header Bidding, including all

Documents concerning Your policy and practice of implementing Open Bidding.

37.   All Documents concerning Your evaluation of Open Bidding Partners, including

any criteria used to evaluate Open Bidding Partners or conditions on or criteria for becoming an

Open Bidding Partner and all contracts, policies, terms of use, requirements, or other agreements

between You and any Open Bidding Partner relating to Open Bidding.

38.   All Documents concerning Publishers, SSPs or Ad Exchanges using Header

Bidding and Open Bidding in combination, the implications of such conduct to You, and any

actions You have taken or considered taking in response.

39.   All Documents concerning any fees charged to Publishers and/or third party Ad

Exchanges for participating in Open Bidding.

40.   All Documents concerning any data that is shared with You by any Ad Exchange,

Ad Network, DSP, SSP, Publisher, or Advertiser that participates in Open Bidding.

41.   All Documents concerning any fees You charge to Publishers, SSPs, or Ad

Exchanges using Header Bidding that are not charged to Publishers, SSPs, or Ad Exchanges who

are not using Header Bidding, or who are Open Bidding Partners or Authorized Buyers.

42.   All Documents concerning any comparison of the performance of Open Bidding

relative to Header Bidding, including the results of, and any supporting documentation

associated with, any simulation or performance experiment related to Open Bidding and Header

Bidding, including any Documents from Your Rasta database or any offline experiments, online

experiments and statistics from Rasta, hold-back experiments run on live traffic via Rasta,

launches through Ariane, and live user testing that measured revenue on AdX, quantity of

transactions on AdX, or the impact of data splitting and capped line items on the revenue or

quantity of transactions among Publishers, Advertisers, or rival exchanges.

43.   All Documents concerning any analysis of the flow of queries running through

Header Bidding as compared to Open Bidding, including any analysis conducted by Fabrizio

Angelini.

44.   All Documents, including any Documents from Your Rasta database, concerning

the impact of Open Bidding on the win rates of AdX, the win rate of Header Bidding winners in

Open Bidding or against AdX, and the volume of inventory sold through Header Bidding

solutions.

45.   All Documents, including any Documents from Your Rasta database, concerning

the impact of Header Bidding and/or Open Bidding on (a) Your Metrics; (b) Publishers' and/or

Advertisers' Metrics; and (c) Your competitors' Metrics.

46.   All Communications with Advertisers, Publishers, and/or Ad Exchanges about Header Bidding and/or Open Bidding; and all Documents, including drafts, providing "talking points" or other instructions to Your employees regarding such Communications.

47.   Documents concerning any attempts by You to solicit any Ad Exchange, Ad Network, or Publisher to participate in Open Bidding Partner, and Documents concerning any independent action You have taken or considered taking to increase or accelerate the adoption of Open Bidding by other Ad Exchanges, Ad Networks, or Publishers.

48.   All Documents reflecting feedback, including complaints, about Open Bidding or the consequences of either.

49.   All Documents concerning any advantage or benefit conferred by increased viewability into Advertiser creatives, ad campaign parameters, or bid responses as a result of Open Bidding which was not available to You prior to the introduction of Open Bidding.

50.   All Documents concerning the operation of Last Look with Open Bidding, and Your eventual decision to remove Last Look for Open Bidding, if such a decision was taken, including Documents that relate to feedback, criticism, or complaints from any Publishers, SSPs, Ad Exchange, or Ad Networks about Last Look's operation in Open Bidding.

51.   The results of, and any supporting Documents associated with, any simulation or experiment You have conducted or are aware of related to Open Bidding, including the experiments referenced in GOOG-TEX-00452550 and including any Documents from Your Rasta database.

52.   Any contract between You and any third-party Ad Exchange, SSP, or Publisher that contains any provision that requires such entity to make Ad Inventory available through Open Bidding if it also sells that inventory through Header Bidding

53.   All Documents, including all correspondence, sent to or from Sundar Pichai, Eric Schmidt, Sergey Brin, Larry Page, Neal Mohan, Prabhakar Raghavan, and/or Sridhar Ramaswamy that contain the phrase "Header Bidding" (or any synonymous term or phrase, *e.g.*, "HB").

ANTICOMPETITIVE ACTS ALLEGED IN OPERATIVE COMPLAINTS

AD SERVER-AD EXCHANGE TIES

Live, Competitive Bids

54.   All Documents concerning the implementation of Your practice to restrict access to live, competitive bids on AdX only to Publishers using DFP, as well as monthly data on the number of Publishers actively using DFP and the number of impressions served by type of Publisher (*e.g.*, LPS).

55.   All Documents concerning Your decision to restrict AdWords or Google Ads Advertisers to purchasing Digital Advertising exclusively from the Google Display Network or AdX, other than for remarketing purposes.

56.   All Documents concerning Your communications to users of DFP and/or other Ad Servers about Your practice to restrict access to live, competitive bids on AdX only to Publishers using DFP.

57.   All Documents reflecting feedback, including complaints, about Your decision or practice to restrict access to live, competitive bids on AdX to Publishers using DFP, or the consequences of such decision or practice.

58.   All Documents concerning the impact of Your decision to restrict access to live, competitive bids on AdX to Publishers using DFP on competition in the U.S. markets for Publisher Ad Servers and Ad Exchanges, including changes in market shares among competitors,

and concerning the impact on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics; and

(c) Your competitors' Metrics.

User ID Encryption

59.   All Documents concerning the implementation of Your practice to encrypt User

IDs that DFP assigns to Publishers' Users and to restrict decryption of User IDs to Advertisers

who bid through AdX or Google Display Network.

60.   All Documents analyzing, evaluating, and or studying the factors that affect the

value and or price of an impression, including the identity of the viewer.

61.   All Communications with Advertisers or Publishers, including complaints and

feedback, and/or public statements about Your practice of restricting decryption of User IDs to

Advertisers who bid through AdX or Google Display Network; and all Documents, including

drafts, providing "talking points" or other instructions to Your employees regarding such

Communications.

62.   All Documents concerning the impact of Your decision to restrict decryption of

User IDs to Advertisers who bid through AdX or Google Display Network on competition in the

U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Networks, and Ad Buying Tools,

including changes in market shares among competitors and including the impact on (a) Your

Metrics; (b) Publishers' and/or Advertisers' Metrics; and (c) Your competitors' Metrics.

63.   All Documents and Communications concerning Your practice and/or decision to

assign different user IDs to a single advertiser customer in certain circumstances.

64.   All Documents concerning who, as between You and Publishers controls or owns

data collected from Users who view Publisher web pages, including Documents concerning Your

decision to agree in contracts with Publishers that Publishers "own[ed]" all data "derived from

the use of" DFP and AdX" and Your decision to require Publishers to obtain the right for You to

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use any data collected from Users in connection with providing ad-serving and exchange

services.

Google Ad Manager (GAM)

65.   All Documents concerning how You calculate or determine all ad serving fees,

the circumstances in which You charge ad serving fees, the circumstances in which You do not

charge ad serving fees, and the circumstances in which You allow an exception to assessment of

ad serving fees You would otherwise charge, including Documents concerning calculating all

fees charged in connection with your ad serving products attendant to but not specifically for

serving ads.

66.   All Documents concerning Your launch of Google Ad Manager ("GAM"),

including Documents concerning Your decision to offer Your Ad Exchange and Your Publisher

Ad Server only pursuant to a single contract for both , as well as metrics prior to, during, and

after this change from Your QEM and QSEM logs in Your AdQuery, LosingAdQuery, and tmp-

AdQueryState databases; revenue data by product; any experiments or other quantitative

analyses that measure or evaluate AdX and DFP integration effects prior to, during, and after the

change, including the impact on competitors, as based on data on Publishers' exchange ranking

choices from DFP and third-party ad servers, data on the volume of transacted impressions per

month through AdX and third-party exchanges, and data on the average monthly revenue of both

AdX and third-party exchanges; and any offline experiments or auction simulations, online

experiments and statistics from Rasta, hold-back experiments run on live traffic via Rasta,

launches through Ariane, and live user testing, as documented via Human Evaluations or other

means, that measured AdX and DFP revenue.

67.   All Documents reflecting feedback, including complaints, about Your decision to offer Your Publisher Ad Server and Your Ad Exchange only pursuant to a single contract for both, or the consequences of such decision or practice.

68.   All Documents concerning the impact of Your decision to offer Your Publisher Ad Server and Your Ad Exchange only pursuant to a single contract for both on competition in the U.S. markets for Publisher Ad Servers and Ad Exchanges, including changes in market shares among competitors and including the impact on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics; and (c) Your competitors' Metrics.

69.   All Documents concerning Your practice and/or decision to cease allowing Publishers to use third party ad servers to sell impressions on Your Ad Exchange.

70.   All contracts and agreements between You and any third-party Ad Exchange, SSP, or Publisher that contain any provision that grants You "fair access" or the opportunity to bid on Publisher Ad Inventory sold on its platform.

AD NETWORK-AD SERVER TIES

Restricting Access to Google Display Network to Publishers Using a Google Ad Server

71.   All Documents concerning the implementation of Your practice to only allow Publishers using a Google Ad Server to sell impressions through the Google Display Network.

72.   All Documents concerning Your communications to users of Google Ad Servers and/or other Ad Servers about Your practice to only allow Publishers using a Google Ad Server to sell impressions through the Google Display Network.

73.   All Documents reflecting feedback, including complaints, about the method by which AdWords selects a winning bid, or Your decision to only allow Publishers using a Google

Ad Server to sell impressions through the Google Display Network, or the consequences of such decision or practice.

74.   All Documents concerning the impact of Your decision to only allow Publishers using a Google Ad Server to sell impressions through the Google Display Network on competition in the U.S. markets for Publisher Ad Servers and Ad Networks, including changes in market shares among competitors and including the impact on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics; and (c) Your competitors' Metrics.

AdSense Exclusive Dealing With Google Display Network

75.   All Documents concerning the implementation of Your practice to require Publishers using AdSense to sell their ad inventory only through Google Display Network.

76.   All Documents concerning Your Communications to users of AdSense and/or other Ad Servers about Your practice to require Publishers using AdSense to sell their ad inventory only through Google Display Network.

77.   All Documents reflecting feedback, including complaints, about Your decision to require Publishers using AdSense to sell their ad inventory only through Google Display Network, or the consequences of such decision or practice.

78.   All Documents concerning the impact of Your decision to require Publishers using AdSense to sell their ad inventory only through Google Display Network on competition in the U.S. markets for Publisher Ad Servers and Ad Networks, including changes in market shares among competitors and including the impact on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics; and (c) Your competitors' Metrics..

DYNAMIC ALLOCATION

79.   All Documents concerning Your decision to implement Dynamic Allocation, including Documents memorializing the decision or any approval(s) thereof and Documents

describing or analyzing the reasons for the decision or any approval(s) thereof, and including documents sufficient to show the identities of the individuals and/or groups that made the decision and the identities of any individuals and/or groups that approved the decision, the dates of the decision and any approval(s) thereof..

80.   All Documents describing or explaining how Publishers rank and/or prioritize Ad Exchanges or Ad Networks for purposes of selling ad impressions, and how You ranked Ad Exchanges or Ad Networks with Dynamic Allocation enabled.

81.   All Documents describing or explaining how Publishers determine or set reserve or floor prices for Ad Exchanges or Ad Networks.

82.   All Documents describing how Dynamic Allocation and the waterfall process operate, including (i) Dynamic Allocation's effects on Publisher revenue and CPMs bid for Ad Inventory, (ii) whether Dynamic Allocation is an improvement over "waterfalling" or "daisy-chaining," and (iii) whether it reduces Publisher risk that ad inventory would not sell.

83.   All Documents concerning the effects of the waterfall systems on Publishers' revenue and CPMs bid for Ad Inventory and how the waterfall systems reduce Publisher risk that Ad Inventory would not sell.

84.   All Documents describing or explaining Real Time Bidding (RTB) and how it operates in the context of Dynamic Allocation.

85.   All Documents, including training videos, that provide or reflect training or instruction to Your employees and representatives and/or Publishers and/or Advertisers on the implementation or use of Dynamic Allocation.

86.   All Documents concerning Your decision to use average historical bids to set Your price floor in Dynamic Allocation, including the identities of the individuals and/or groups

that made the decision, the identities of any individuals and/or groups that approved the decision, the dates of the decision and any approval(s) thereof, Documents memorializing the decision or any approval(s) thereof, and Documents describing or analyzing the reasons for the decision or any approval(s) thereof.

87.   All Documents quantifying, analyzing or evaluating the potential or actual impact of Dynamic Allocation on Publisher revenues, including comparing revenues from Dynamic Allocation versus Header Biding.

88.   All Documents quantifying, analyzing or evaluating the potential or actual impact of Dynamic Allocation on advertiser use of AdX or GDN.

89.   All Documents quantifying, analyzing or evaluating the potential or actual impact of Dynamic Allocation on Your Metrics, including the quality of impressions transacted on AdX via Dynamic Allocation, as assessed through metrics including the clickthrough rate (CTR) or cost per mille (CPM), compared to those transacted through competing intermediaries.

90.   All Documents quantifying, analyzing or evaluating the potential or actual impact of Dynamic Allocation (a) Publishers' and/or Advertisers' Metrics and (b) Your competitors' Metrics.

91.   All Documents quantifying, analyzing or evaluating the potential or actual impact of Dynamic Allocation in the U.S. markets for Publisher Ad Servers, Ad Exchanges, and Ad Networks, including changes in market shares among competitors.

92.   All Documents concerning Your promotion of Dynamic Allocation, including communications with Publishers concerning how Dynamic Allocation would increase Publisher revenue, fix ad delivery issues, and/or otherwise benefit Publishers; and all Documents,

including drafts, providing "talking points" or other instructions to Your employees regarding such Communications.

93.   All Documents reflecting feedback, including complaints regarding Dynamic Allocation or its consequences.

ENHANCED DYNAMIC ALLOCATION

94.   All Documents concerning Your decision to implement Enhanced Dynamic Allocation, including Documents memorializing the decision or any approval(s) thereof, and Documents describing or analyzing the reasons for the decision or any approval(s) thereof , and including Documents sufficient to show the identities of the individuals and/or groups that made the decision, the identities of any individuals and/or groups that approved the decision, the dates of the decision and any approval(s) thereof..

95.   All Documents concerning how Enhanced Dynamic Allocation works, including how You determined the reserve price and/or the "Temporary CPM" and/or the "Value CPM" in auctions using Enhanced Dynamic Allocation, how Real Time Bidding (RTB) works in the context of Enhanced Dynamic Allocation, and how Enhanced Dynamic Allocation differs from original Dynamic Allocation.

96.   All Documents, including training videos, that provide or reflect training or instruction to Your employees and representatives and/or Publishers and/or Advertisers on the implementation or use of Enhanced Dynamic Allocation.

97.   All Documents describing or explaining that rival Ad Exchanges would be prevented from bidding on ad impressions subject to Enhanced Dynamic Allocation.

98.   All Documents concerning the automatic enrollment of Publishers in Enhanced Dynamic Allocation.

99.   All Documents concerning AdX not offering live, competitive bidding if a Publisher turns off Enhanced Dynamic Allocation.

100.   All Documents concerning Enhanced Dynamic Allocation's impact on advertiser use of AdX or GDN.

101.   All Documents quantifying, analyzing or evaluating the potential or actual impact of Enhanced Dynamic Allocation on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics; and (c) Your competitors' Metrics, including Documents quantifying, analyzing or evaluating the potential or actual impact of Enhanced Dynamic Allocation on the share of and value of Publishers' Ad Inventory sold through Direct Sales.

102.   All Documents quantifying, analyzing or evaluating the potential or actual impact of Enhanced Dynamic Allocation in the U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Networks, or Ad Buying Tools, including changes in market shares among competitors.

103.   All Documents concerning Your promotion of Enhanced Dynamic Allocation, including communications with Publishers concerning how Enhanced Dynamic Allocation would increase Publisher revenue, fix ad delivery issues, and/or otherwise benefit Publishers; and all Documents, including drafts, providing "talking points" or other instructions to Your employees regarding such Communications.

104.   All Documents reflecting feedback, including complaints, about Enhanced Dynamic Allocation or its consequences, including requests by any Publisher to stop participating in Enhanced Dynamic Allocation.

PROJECT BERNANKE

105.   All Documents concerning Your decision to implement Project Bernanke, including original Bernanke, Bell, and Global Bernanke, and any other iteration of Bernanke,

including any Document concerning the analysis of the effect of Bernanke on Publishers'
revenue, Advertisers' prices, CPMs, or Your revenue, and including any Documents concerning
the conditions of or results from any offline experiments or auction simulations, online
experiments and statistics from Rasta, hold-back experiments run on live traffic via Rasta,
launches through Ariane, and live user testing, as documented via Human Evaluations or other
means, including launches of throttling by ad group for buy-side DRS, and Documents sufficient
to explain how Bernanke operates, including how the additional revenue You received due to
Your implementation of each version of Bernanke in one auction is used in subsequent auction
and including any decision-making or analytical Documents used to motivate and inform the
association between Project Bernanke, Global Bernanke and Project Bell, including those
associated with the "go/bernanke-for-1p" link; as well as the identities of the individuals and/or
groups that made the implementation decision or the decision to discontinue use of any version
of Project Bernanke, the identities of any individuals and/or groups that approved the decision,
the dates of the decision and any approval(s) thereof, Documents memorializing the decision or
any approval(s) thereof, and Documents describing or analyzing the reasons for the decision or
any approval(s) thereof.

106.   All Documents that describe or explain how Project Bernanke, Bell and Global
Bernanke operate, including experiments for the launch of Global Bernanke, including tests on
the impact on revenue as well as on the margins seen for various queries, including launch
133445 from the Ariane launch ID, as referenced in GOOG-NE-07264805, as well as training
videos, that provide or reflect training or instruction to Your employees and representatives
and/or Publishers and/or Advertisers on the implementation or operation of Project Bernanke,
and Documents quantifying, analyzing or evaluating the potential or actual impact of Project

Bernanke and Global Bernanke on Publishers' and/or Advertisers' Metrics such as Advertisers'

prices and Publisher revenue, win rates of Your Ad Buying Tools, and Your revenue or other

Metrics, and Your competitors' Metrics, in addition to Documents concerning the impact of

Project Bell in the U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Buying Tools, and

Ad Networks, including changes in market shares among competitors.

107.   All Documents concerning how You use or used revenue collected by You

through Project Bernanke, Global Bernanke, and Project Bell.

108.   Documents sufficient to show, for each calendar quarter during the Relevant Time

Period, the amount of revenue captured by the pricing differential created by Project Bernanke,

Global Bernanke, and Bell, as well as to show the number of AdX auctions in which the amount

paid by the Advertiser and/or the amount received by the Publisher was altered as a result of

Your implementation of Project Bernanke, Global Bernanke, and Bell, to show the difference

between the amounts Publishers received from auctions conducted under each version of Project

Bernanke, Global Bernanke, and Bell and the amounts Publishers would have received had

Project Bernanke, Global Bernanke, and Bell not been implemented (*i.e.*, in a true second-price

auction), and those that show the difference between the amounts Advertisers paid for

impressions sold in auctions conducted under each version of Project Bernanke, Global

Bernanke, and Bell and the amounts Advertisers would have paid had Project Bernanke not been

implemented.

109.   All Documents concerning Your decision to implement or Your consideration of

Project Bell, including any Document quantifying, analyzing or evaluating the potential or actual

impact of Project Bell on Publishers' and/or Advertiser Metrics such as Advertisers' prices and

Publisher revenue, win rates of Your Ad Buying Tools, and Your revenue or other Metrics, and

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Your competitors' Metrics, as well as Documents concerning the impact of Project Bell in the

U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Buying Tools, and Ad Networks,

including changes in market shares among competitors, including any Documents concerning the

conditions of or results from any experiment(s) or test(s) You ran concerning Project Bell and

Documents sufficient to explain how Project Bell operates.

110.   All Communications with Advertisers or Publishers and/or public statements

describing or referring to AdX auctions as "second-price" auctions; all Documents, including

drafts, providing "talking points" or other instructions to Your employees regarding such

Communications; all complaints or feedback from any DSP, SSP, Advertiser, or Publisher

regarding Your use of Bernanke, Global Bernanke, or Bell or their consequences, Your internal

discussions of any such complaints, any responses You have made to such complaints; and all

Documents concerning efforts to prevent customers from learning of these practices, including

Documents concerning disclosure or non-disclosure of Project Bernanke to parties outside of

Google, concerns about Your lack of transparency regarding Project Bernanke, and/or those that

relate the consequences of disclosing such programs. Documents responsive to this request

should not be excluded simply because the feedback or complaint was coming from a party that

was unaware that Bernanke, Global Bernanke, or Bell existed.

DYNAMIC REVENUE SHARING

111.   All Documents concerning Your decision to implement Dynamic Revenue

Sharing ("DRS"), including any Document concerning analysis of the effect in terms of revenue,

price and/or utility, of DRS and tDRS on Publishers, Advertisers, or You, feature changes or

updates to DRS and tDRS, comparisons between various DRS models, and including any

Documents concerning the conditions of, effects of or results from any offline experiments or

auction simulations, online experiments and statistics from Rasta, hold-back experiments run on live traffic via Rasta, launches through Ariane, and live user testing, as documented via Human Evaluations or other means You ran, that measured how each version of DRS adjusts Your take rates, including Data on the implemented take rates from Supermixer logs, WebPropertyPageSettings protobuf fields from the Supermixer, QEMs, and QSEMs logged to AdQueries and other databases following the AdX auction, and all other logs pertaining to the AdX auction prior to, during, and after the launches of each variant of DRS; impacts on Your revenue and other Metrics; how DRS affected the U.S. markets for Publisher Ad Servers, Ad Exchanges, and Ad Networks, Ad Buying Tools, including via changes in market shares among competitors; the effects on Publishers' and/or Advertisers' Metrics, such as Publishers' revenue and Advertisers' prices; the effects on AdX's win-rate and Your competitors' Metrics; as well as any Documents, experiments, or Data concerning the selection of DRS candidates for launch, including DRS v1, DRS v2, two-sided DRS, revised two-sided DRS, eDRS, truthful DRS, Negative Rev-share DRS, RPO-aware DRS v2, and RPO-powered Bid-oblivious DRS, and any other variants that were considered; as well as the identities of the individuals and/or groups that made the implementation decision, the identities of any individuals and/or groups that approved the decision, the dates of the decision and any approval(s) thereof, Documents memorializing the decision or any approval(s) thereof, and Documents describing or analyzing the reasons for the decision or any approval(s) thereof.

112.   Documents sufficient to identify the individuals or groups responsible for the development and/or implementation of Dynamic Revenue Sharing and the responsibilities of each such individual or group in connection with Dynamic Revenue Sharing.

113.   All Documents, including training videos, that provide or reflect training or instruction to Your employees and representatives and/or Publishers and/or Advertisers on the implementation or operation of Dynamic Revenue Sharing.

114.   Documents, including any Documents from Your Rasta database, concerning any studies, tests, analyses, or experiments concerning negative revenue share DRS or bid-oblivious DRS, including those during 2015, ahead of and after the launch of DRS v2, and those documenting the impact on Your and Your competitors' Metrics, including revenue, share of transactions, and profit.

115.   Documents quantifying, analyzing or evaluating the potential or actual impact of Dynamic Revenue Sharing in the U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Networks, and Ad Buying Tools, including changes in market shares among competitors.

116.   Data reflecting Your use of Dynamic Revenue Sharing, including: Ad Impression-level data that includes all price floors, including original price floors and those subsequent to any modification by You; Ad Impression-level data and information collected by You pertaining to bids from rival exchanges, including the names of the exchanges and bids placed thereon; and initial bid(s) on Your exchange and bid(s) subsequent to any observation or evaluation of bids on rival exchanges.

117.   All Communications with Advertisers or Publishers and/or public statements about Dynamic Revenue Sharing; all Documents, including drafts, providing "talking points" or other instructions to Your employees regarding such Communications; all complaints or feedback from any DSP, SSP, Advertiser, or Publisher regarding Your use of DRS or its consequences, Your internal discussions of any such complaints; and any responses You have made to such complaints, regardless of whether or not the party providing feedback knew of the

program's existence. To the extent that DRS was not disclosed to customers, produce Documents concerning efforts to prevent customers from learning of these practices and/or concerns about Your lack of transparency regarding Dynamic Revenue Sharing (including documents discussing or related to the implementation of "Truthful DRS" ("tDRS") and documents discussing or related to making Dynamic Revenue Sharing truthful, transparent, open or fair).

118.   Documents sufficient to understand Your alleged decision to discontinue use of Dynamic Revenue Sharing, including the identities of the individuals and/or groups that made the decision, the identities of any individuals and/or groups that approved the decision, the dates of the decision and any approval(s) thereof, Documents memorializing the decision or any approval(s) thereof, and documents describing or analyzing the reasons for the decision or any approval(s) thereof.

CAPPING LINE ITEMS IN GOOGLE'S AD SERVER

119.   All Documents concerning Your decision to cap line items in Your Ad Server, including Documents memorializing the decision or any approval(s) thereof, and Documents describing or analyzing the reasons for the decision or any approval(s) thereof, and including Documents sufficient to show the identities of the individuals and/or groups that made the decision, the identities of any individuals and/or groups that approved the decision, and the dates of the decision and any approval(s) thereof.

120.   Documents sufficient to identify the individuals or groups responsible for the development and/or implementation of the cap on line items in Your Ad Server and the responsibilities of each such individual or group in connection with the policy, practice or initiative to cap line items.

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121.   All Documents concerning Publishers' requests to increase the number of permissible line-items in Your Ad Server, Your decisions to approve or reject such requests, and Your communications with Publishers regarding Your approval or rejection of such requests.

REDACTION OF AUCTION DATA

122.   All Documents concerning the identity all data fields You redacted from Publishers' consolidated auction records, including the fields "Key Part" and "TimeUsee2," and the reasons or justifications for Your decision to redact certain data fields from Publishers' consolidated auction records.

123.   All Documents concerning the impact of Your decision to redact certain data fields from Publishers' consolidated auction records on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics; and (c) Your competitors' Metrics.

124.   All Documents concerning the impact of Your decision to redact certain data fields from Publishers' consolidated auction records in the U.S. markets for Publisher Ad Servers, Ad Exchanges, Ad Networks, or Ad Buying Tools, including changes in market shares among competitors.

125.   All Documents studying, evaluating, or analyzing how Your practice of redacting certain data fields from Publishers' consolidated auction records impacted Publishers' ability to evaluate the performance of Ad Exchanges in Header Bidding.

126.   All Documents reflecting feedback, including complaints regarding Your practice of redacting certain data fields from Publishers' consolidated auction records, and Your practice and/or decision to split the data You provide to Publishers into bid-level data and impression-level data or the consequence of that practice.

127.   All Documents, including any Documents from Your Rasta database and any internal tests, experiments, simulations, or studies, concerning Your Decision to introduce a new type of Bid Data Transfer file that contains bidding data from Authorized Buyers and Open Bidding but does not contain impression-level data or Header Bidding data.

128.   All Documents concerning Your policy, practice, and/or decision to split the data You provide to Publishers into bid-level data and impression-level data, including documents concerning the impact on Your Metrics and the Metrics of Publishers, Advertisers, and/or competitors.

129.   All Documents studying, evaluating, or analyzing how Your practice of splitting the data into bid-level data and impression-level data impacted Publishers' ability to evaluate the performance of Ad Exchanges in Header Bidding.

130.   All Documents concerning any efforts made by You to allow Publishers to link Your data transfer file with performance data from Header Bidding auctions.

131.   All Documents concerning any efforts You have made to assist Publishers in comparing their Header Bidding data with the Unified Auction data reporting You provide.

132.   With respect to Your decision that Publishers "will not be able to join the Bid Data Transfer file with other Ad Manager Data Transfer files" (*see* https://www.blog.google/products/admanager/rolling-out-first-price-auctions-google-ad-manager-partners/), produce:

    a.   all Documents concerning Your decision, including all correspondence and studies underlying or otherwise relating to the decision, Your evaluation of any alternatives, and/or any analysis of how the decision may affect or has affected any Publisher or Header Bidding solution;

b.   a representative example of the Bid Data Transfer and other Ad Manager Data Transfer files, relating to the sale of a particular Ad Impression won by a bidder participating via Header Bidding, which You provided to the Publisher before this change; and

c.   a representative example of the Bid Data Transfer and other Ad Manager Data Transfer files, relating to the sale of a particular Ad Impression won by a bidder participating via Header Bidding, which You provided to the Publisher after this change.

133.   Documents referencing both "Header Bidding" (or any synonymous term or phrase, *e.g.*, "HB") and "Transfer file" (or any synonymous term or phrase).

PROJECT POIROT AND PROJECT ELMO

134.   Documents sufficient to understand Your decisions to implement each version of Project Poirot and Project Elmo, including the identities of the individuals and/or groups that made the decisions, the identities of any individuals and/or groups that approved the decisions, the dates of the decision and any approval(s) thereof, Documents memorializing the decisions or any approval(s) thereof, and Documents describing or analyzing the reasons for the decisions or any approval(s) thereof.

135.   All Documents, including training videos, that provide or reflect training or instruction to Your employees and representatives and/or Publishers and/or Advertisers on the implementation or operation of Project Poirot and Project Elmo, including how Project Poirot and Project Elmo were used to identify which Ad Exchanges likely were participating in Header Bidding.

136.   All Documents that describe or explain how Project Poirot and Project Elmo operate, including how You used Project Poirot or Project Elmo to identify which Ad Exchanges likely were participating in Header Bidding.

137.   All Documents concerning how DV360 adjusted bids for impressions under Project Poirot or Project Elmo.

138.   All Documents concerning the impact of Project Poirot or Project Elmo on the win rates of AdX, match rate, or revenue share and the amount of any such impact in each calendar quarter during the Relevant Time Period.

139.   All Documents quantifying, analyzing, evaluating, or studying the impact of Project Poirot or Project Elmo on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics; and (c) Your competitors' Metrics.

140.   All Documents concerning the potential or actual the impact of Project Poirot or Project Elmo in the U.S. markets for Ad Exchanges, Ad Networks, and Ad Buying Tools, including changes in market shares among competitors.

141.   All Documents concerning Your Communications with Advertisers or Publishers and/or public statements about Project Poirot or Project Elmo; all Documents, including drafts and training materials, providing "talking points" or other instructions to Your employees regarding such Communications; and all Documents reflecting feedback, including complaints, about Project Poirot or Project Elmo or their consequences.

142.   All Documents concerning disclosure or non-disclosure of Project Poirot and/or Project Elmo to parties outside of Google and/or concerns about Your lack of transparency regarding Project Poirot and/or Project Elmo.

143.   Documents that demonstrate how DV360 selects a winning bid from multiple demand sources to before it participates in an AdX auction, Open Bidding auction, or Unified Auction, or any third-party auction.

144.   All Documents concerning bid shading, bidding Algorithms, ad serving Algorithms, artificial intelligence, computer programs and applications, or other bidding strategy used by Google Ads or DV360 when bidding into any Ad Exchange, Header Bidding solution, or other auction, including Documents that relate to experiments ran.

145.   All Documents concerning any efforts undertaken, policies implemented, or buying strategies implemented by You to avoid buying Ad Inventory through Header Bidding auctions.

VIEWABLE CPMS ("VCPMS")

146.   All Documents and Communications, including white papers, market analyses, competitive analyses, strategic plans, and other decision-making documents, concerning Your decision to cause Your Publisher Ad Server to count bids for mobile-app inventory returned by Your Ad Exchange and Open Bidding participants on a vCPM basis, since October 1, 2016.

147.   All Documents and Communications describing or discussing how You determine whether an impression is "viewable," and whether or how that information is communicated to providers of products or services that compete with Your Ad Tech Products, since October 1, 2016.

148.   All Documents and Communications forecasting, analyzing, or otherwise discussing the impact to publisher revenue from causing Your Publisher Ad Server to count bids for mobile-app inventory returned by Your Ad Exchange and Open Bidding participants on a vCPM basis, since October 1, 2016.

149.   All Documents and Communications forecasting, analyzing, or otherwise discussing the impact to Your revenue, Your Ad Exchange's bids and win rates, and Your share of the Ad Exchange and Publisher Ad Server markets, from causing Your Publisher Ad Server to

count bids for mobile-app inventory returned by Your Ad Exchange and Open Bidding participants on a vCPM basis, since October 1, 2016.

150.   All Documents and Communications concerning Your representations to Daily Mail, made in or around October 2017, that vCPM was the industry standard among Ad Exchanges, and that Your change to vCPM would have "a near zero effect" on Daily Mail's revenue. *See* First Amended Complaint, No. 21-md-03010 (PKC), ECF No. 400, ¶¶ 148-149.

151.   All Documents and Communications describing or discussing how Your Publisher Ad Server receives or processes vCPM bids, including Your decision to require publishers to apply multipliers to bids submitted by other Ad Exchanges rather than to bids submitted by Your Ad Exchange, since October 1, 2016.

152.   All Documents and Communications regarding Your decision not to cause Your Publisher Ad Server to count bids for desktop and mobile web inventory returned by Your Ad Exchange and Open Bidding participants on a vCPM basis, both before and after Your introduction of Unified Pricing Rules, since October 1, 2016.

UNIFIED PRICING RULES

153.   All Documents concerning Your decision to implement Unified Auction (including Your decision to move from a second-price to a first-price Auction) and Unified Pricing Rules, including strategy documents, white papers, competitive impact studies, market analyses preceding that decision as well as those evaluating the impact on and performance of Your Ad Tech Products, Documents memorializing the decision or any approval(s) thereof, Documents describing or analyzing the reasons for the decision or any approval(s) thereof, and Documents sufficient to show the identities of the individuals and/or groups that made the

decision, the identities of any individuals and/or groups that approved the decision, and the dates of the decision and any approval(s) thereof.

154.   All Documents analyzing, evaluating, or studying Publisher use of per-buyer (*e.g.*, per-Ad Exchange or per-Ad Buying Tool) price floors, including using price floors to increase revenue and improve quality of advertisements.

155.   All Documents concerning the actual or potential impact of Uniform Pricing Rules and Unified Auction on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics, including the impact of Uniform Pricing Rules on CPMs bid for Publisher Ad Inventory; and (c) Your competitors' Metrics.

156.   All Documents concerning Your communications with customers regarding Your decision to switch to Unified Auction and to implement Unified Pricing Rules, including Documents concerning any complaints or concerns relating to Unified Auction or Unified Pricing Rules communicated by any Publisher, Advertiser, SSP, DSP, or Ad Exchange, any of Your internal discussion relating thereto, and any of Your responses.

157.   All Documents concerning any attempts by any Publisher, SSP, or Publisher Ad network to circumvent GAM's Uniform Pricing Rules, and all Documents concerning exceptions to or accommodations or variations of Unified Pricing Rules requested by Publishers and Your decision whether to approve or reject such requests.

158.   All Documents, including any Documents from Your Rasta database and any internal tests, experiments, simulations, or studies, which measure, forecast, predict, study, or research, concerning the impact that Your decision to move to a Unified Auction or adopt Unified Pricing Rules would have or has had on the adoption of Header Bidding.

159.   Data sufficient to show, separately for Google Ads and DV360, on a monthly

basis for the period starting October 2019 and until the present, the number of impressions (as an

absolute number and as a percentage of the total number of impressions available in the Unified

Auction) that Google Ads or DV360 won slightly above the floor price. For purposes of this

request, "slightly above" shall mean that the difference between the price that Google Ads or

DV360 paid and the floor price or next highest bid does not exceed $0.10 CPM.

160.   All Documents analyzing, evaluating, or studying the Unified Pricing Rules

dashboard (also referred to as "dash"), including all distinct iterations of such dashboard.

LAST TOUCH ATTRIBUTION

161.   Documents sufficient to understand Your decision to change from Last Touch

Attribution to multi-touch attribution, including the identities of the individuals and/or groups

that made the decision, the identities of any individuals and/or groups that approved the decision,

the dates of the decision and any approval(s) thereof, Documents memorializing the decision or

any approval(s) thereof, and Documents describing or analyzing the reasons for the decision or

any approval(s) thereof.

162.   All Documents quantifying, analyzing or evaluating the potential or actual impact

of changing from Last Touch Attribution to multi-touch attribution or any other data-based

attribution.

163.   All Documents analyzing, evaluating, or studying the relative merits or impact of

cross-channel attribution and Last Touch Attribution.

RESERVE PRICE OPTIMIZATION ("RPO")

164.   Documents sufficient to understand Your decision to implement RPO, including

the identities of the individuals and/or groups that made the decision, the identities of any

individuals and/or groups that approved the decision, the dates of the decision and any

approval(s) thereof, Documents memorializing the decision or any approval(s) thereof, and Documents describing or analyzing the reasons for the decision or any approval(s) thereof.

165.   Documents sufficient to identify the individuals or groups responsible for the development and/or implementation of RPO and the responsibilities of each such individual or group in connection with RPO.

166.   All Documents concerning any decision by You to restrict the utilization of dynamic price floors to Publishers using or transactions occurring on AdX.

167.   Documents sufficient to describe or explain how RPO operated when You claimed to run a "second-price auction," including how You used RPO to calculate and implement customized floor prices/reserve prices.

168.   Documents sufficient to describe or explain how RPO operated in a "first-price auction," including how You used RPO (also known as "Bulbasaur") to calculate and implement customized floor prices/reserve prices.

169.   All Documents, including training videos, that provide or reflect training or instruction to Your employees and representatives and/or Publishers and/or Advertisers on the implementation or operation of RPO.

170.   All Documents concerning Your experiments to test the effects of RPO and to test RPO variants, both proposed and adopted.

171.   All Documents quantifying, analyzing or evaluating the potential or actual impact of RPO on Advertisers' ability to calculate their reserve price, forecast inventory availability, and meet their spend targets.

172.   All Documents concerning Your use of (a) user IDs derived from Your Publisher Ad Server and/or (b) bid history data derived from AdX, to set RPO floor prices/reserve prices.

173.   Documents sufficient to show the code and Algorithms used to determine the customized RPO floor price/reserve price.

174.   Documents concerning your determination of the reserve price for an Ad Impression when RPO is enabled, including any Documents concerning the conditions of or results from any experiment or testing You have performed concerning RPO.

175.   Documents concerning the confidentiality and ownership of (a) Advertisers' bid information, and/or (b) information stored in or associated with Publishers' user IDs.

176.   For each calendar quarter during the Relevant Time Period, (a) all Documents quantifying, analyzing or evaluating the potential or actual impact of RPO on the amount Advertisers paid for Ad Impressions on AdX; and (b) Documents sufficient to show the percentage and number of Ad Impressions affected by RPO.

177.   All Documents quantifying, analyzing or evaluating the potential or actual impact of RPO on Advertiser "match rate."

178.   Documents quantifying, analyzing or evaluating the potential or actual impact of RPO on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics; and (c) Your competitors' Metrics.

179.   Documents quantifying, analyzing or evaluating the potential or actual impact of RPO in the U.S. markets for Ad Exchanges, Ad Networks, and Ad Buying Tools, including changes in market shares among competitors.

180.   All Communications with Advertisers or Publishers and/or public statements concerning RPO, including Communications regarding the advantages or disadvantages of "first price auctions" or "second price auctions"; all Documents, including drafts, providing "talking points" or other instructions to Your employees regarding such Communications; and all

Documents concerning communications with customers about Reserve Price Optimization, including any complaints from any DSP, SSP, Advertiser, or Publisher regarding Your use of RPO or its consequences, Your internal discussions of any such complaints, and any responses You have made to such complaints.

181.   All Documents concerning disclosure or non-disclosure of RPO to parties outside of Google and/or concerns about Your lack of transparency regarding RPO.

AUTOMATICALLY SPENDING SEARCH-ONLY ADVERTISER BUDGETS ON THE GOOGLE DISPLAY NETWORK (SEARCH+ AND VARIATIONS)

182.   Documents, including any analysis, experiments, studies, or testing (including A/B testing or other comparative analysis) concerning the default campaign type in AdWords and/or the potential effects of any change or potential change thereto, concerning Your decision to set the default campaign type in AdWords to include both Google Search Network and Google Display Network, and any effects such setting has had or could have on You or any Publisher, Advertiser, Publisher Ad Server, Ad Exchange, DFP, or SSP.

183.   Documents concerning any decision by You to disclose AdWords and Google Ads log-level bidding data to Your Ad Tech Products.

184.   Documents concerning development of Your requirements and conditions applicable to Advertisers that contract with Google to use its Ad Tech Products, including the opening of a Google Search advertising account or the purchase of Google Search inventory.

185.   Documents concerning Your decision to implement Search+, Smart Campaigns, and Remarketing for Search Advertisers.

186.   Documents concerning Your decision to preclude new AdWord Advertisers from opting out of display advertising under Smart Campaigns.

187.   Documents analyzing, evaluating, or studying the impact of Search+, Smart Campaigns, and/or Remarketing for Search Advertisers on the revenue of Google Display Network.

188.   Documents concerning the impact of Search+, Smart Campaigns, and/or Remarketing for Search Advertisers on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics; and (c) Your competitors' Metrics.

189.   Documents concerning the impact of Search+, Smart Campaigns, and/or Remarketing for Search Advertisers in the U.S. markets for Ad Networks, Ad Exchanges, and/or Ad Servers, including changes in market shares among competitors.

190.   Documents concerning Your communications with customers regarding Your decision to implement Search+, Smart Campaigns, and/or Remarketing for Search Advertisers; and Documents reflecting feedback, including complaints, regarding Your practices of implementing Search+, Smart Campaigns, and/or Remarketing for Search Advertisers, or the consequences of such practices.

MINIMUM BID TO WIN

191.   All Documents concerning Your Algorithms on pricing of advertisements, bidding parameters, and revenue share with Publishers, including how ad pricing, bidding parameters and revenue share with Publishers has changed during the Relevant Time Period.

192.   All Documents concerning Your decision to implement Minimum Bid to Win, including Documents memorializing the decision or any approval(s) thereof, and Documents describing or analyzing the reasons for the decision or any approval(s) thereof, and including Documents sufficient to show the identities of the individuals and/or groups that made the

decision, the identities of any individuals and/or groups that approved the decision, the dates of

the decision and any approval(s) thereof..

193.   All Documents concerning Your decision to provide "the minimum bid price to

win after the auction closes" (*see* https://www.blog.google/products/admanager/rolling-out-first-

price-auctions-google-ad-manager-partners/), including Documents concerning Your

consideration of whether such information could or should be shared with those who bid on an

Ad Auction via Header Bidding.

194.   All Documents concerning how Your Ad Tech Products use information provided

by Minimum Bid to Win, including whether, and if so how, Your Ad Tech Products use

Minimum Bid to Win Information to alter bids for subsequent auctions.

195.   Data sufficient to show, separately for Google Ads and DV360, on a monthly

basis for the period starting January 2016 and until the present, the number of Ad Impressions

(as an absolute number and as a percentage of the overall impressions made available on AdX or

GAM) that Google Ads or DV360 won slightly above the bid submitted from a Header Bidding

demand partner, whereby such bid from the Header Bidding demand partner would have

otherwise won the impression (the "winning header bidding bid"). For purposes of this request,

"slightly above" shall mean that the difference between the price that Google Ads or DV360 paid

and the winning Header Bidding bid does not exceed $0.10 CPM.

196.   All Documents concerning the impact of Minimum Bid to Win on (a) Your

Metrics; (b) Publishers' and/or Advertisers' Metrics, including on CPMs bid for Publisher Ad

Inventory; and (c) Your competitors' Metrics.

197.   Documents concerning the impact of Minimum Bid to Win in the U.S. markets for Ad Exchanges and/or Ad Buying Tools, including changes in market shares among competitors.

198.   Documents concerning Your communications with customers regarding Minimum Bid to Win, including customer feedback and/or complaints.

POLICING OF PURPORTED MALICIOUS CODE OR POLICY VIOLATIONS

199.   All Documents concerning any code used in Your Ad Servers to prevent rival Ad Networks or Ad Exchanges from competing for ad impressions.

200.   All Documents analyzing, evaluating, and/or studying the prevention of rival Ad Networks or Ad Exchanges from competing for Ad impressions served by Your Ad Server due, in whole or part, to code issues.

201.   All Documents concerning the impact of Your prevention of rival Ad Networks or Ad Exchanges from competing for ad impressions on (a) Your Metrics; (b) Publishers' and/or Advertisers' Metrics; and (c) Your competitors' Metrics.

202.   All Documents concerning communications with rival Ad Networks or Ad Exchanges about the rejection of rival Ad Networks' or Ad Exchanges' code by Your Ad Server, including complaints by rival Ad Networks or Ad Exchanges.

203.   All Documents concerning communications with Publishers, including complaints by Publishers, about rejection of rival Ad Networks' or Ad Exchanges' code by Your Ad Server or about purported policy violations that caused an ad or ads not to be served by Your Ad Server.

ACCELERATED MOBILE PAGES ("AMP")

204.   All Documents concerning Your decision to make AMP Pages incompatible with Client-Side Header Bidding, including any complaints from Publishers regarding your decision.

205.   All Documents concerning Your decision to disable "remote.html" or any other method Publishers used to facilitated Client-Side Header Bidding on AMP pages, including your decision to replace "remote.html" with "Real Time Config."

206.   All Documents concerning the impact of Real Time Config on Publisher revenues and CPMs for Publisher Inventory.

207.   All Documents concerning your decision to limit the "News Carousel" and "Top Stories" sections of your organic search results to AMP Pages.

208.   All Documents concerning any preference offered by GAM or AdX for AMP-compliant advertising.

209.   All Documents concerning any efforts by any Publisher or third-party Ad Exchange or SSP to increase the number of demand sources able to bid on Ad Inventory on AMP Pages, including those concerning any efforts based on traditional mediation techniques, Header Bidding, or by any other means.

210.   All Documents concerning Your use or imposition of timeout restrictions on Bid Requests concerning ads served on AMP Pages when the inventory being served was sold through a Header Bidding solution or through any competing Ad Exchange.

211.   All Documents concerning Your restrictions on third-party vendors that provide ad analytics services from interoperating with any of Your Ad Tech Products or from having access to data concerning ad performance on an AMP Page.

212.   All Documents concerning lower monetization of Ad Inventory on AMP Pages compared to their non-AMP Page counterparts on mobile and desktop.

SEARCH RANKING CONDUCT

213.   All Documents and Communications, including launch reports, product roadmaps, API documentation, interface documentation, interface specification, code

documentation, product architecture schematics, and presentations, describing all Core

Algorithm Updates released on or around (a) September 24, 2019, (b) June 3, 2019, (c) March

12, 2018, and (d) November 5, 2017.

214.   All Documents and Communications relating to EAT, EEAT, Human Reviewers,

NewsGuard, Links Reports, Google Publisher Tags, Core Web Vitals, Page Experience, Mobile

Usability, Policy Issues, Sensitive Categories, and Digital Content Labels in the design or

implementation of all Core Algorithm Updates released on or around (a) September 24, 2019,

(b) June 3, 2019, (c) March 12, 2018, and (d) November 5, 2017.

215.   All Documents and Communications, including launch reports, white papers,

market analyses, competitive analyses, strategic plans, and other decision-making documents,

concerning Your decision to release all Core Algorithm Updates on or around (a) September 24,

2019, (b) June 3, 2019, (c) March 12, 2018, and (d) November 5, 2017.

216.   All Documents and Communications forecasting, analyzing, or otherwise

discussing the impact to Your revenue, and Your share of the Ad Exchange and Publisher Ad

Server markets, from all Core Algorithm Updates released on or around (a) September 24, 2019,

(b) June 3, 2019, (c) March 12, 2018, and (d) November 5, 2017.

217.   All Documents and Communications forecasting, analyzing, or otherwise

discussing the impact to web pages' placement in Your organic search results, and web pages'

traffic derived from Your search results, arising from all Core Algorithm Updates released on or

around (a) September 24, 2019, (b) June 3, 2019, (c) March 12, 2018, and (d) November 5, 2017.

218.   All Communications between You and others, including Publishers, concerning

all Core Algorithm Updates released on or around (a) September 24, 2019, (b) June 3, 2019, (c)

March 12, 2018, and (d) November 5, 2017.

219.   All Documents and Communications forecasting, analyzing, or otherwise discussing how the placement of web pages in Your organic search results impacts Your revenue, including revenue You generate from Your Ad Tech Products, and Your share of the Ad Exchange and Publisher Ad Server markets, since January 1, 2017.

220.   All documents and communications forecasting, analyzing, or otherwise discussing how Your revenue, including revenue You generate from Your Ad Tech Products, impacts the placement, ranking, and visibility of web pages in Your organic search results, including how You design, consider, implement, or otherwise use EAT, EEAT, Human Reviewers, material from NewsGuard, Links Reports, Core Web Vitals, Page Experience, Mobile Usability, Google Publisher Tags, Policy Issues, Sensitive Categories, and Digital Content Labels in your organic search results, since January 1, 2017.

NETWORK BIDDING AGREEMENT[2]

221.   Documents sufficient to identify the person or persons who originated and/or developed the Network Bidding Pilot Program.

222.   All Documents analyzing, describing, evaluating, or studying the design or methodology considered for or employed by the Network Bidding Pilot Program.

223.   All Documents analyzing, describing, evaluating, or studying the scope, performance, status, or third-party participation in the Network Bidding Pilot Program.

224.   All Documents analyzing, describing, evaluating, or studying the nature and scope of (a) Google Program-Related Information; (b) Google Proprietary Data; and (c) Google User Data.

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[2] All capitalized terms in the Requests in this section shall have the definition specified in the Network Bidding Agreement ("NBA") entered into by Google LLC and Google Ireland Limited and Facebook, Inc. and Facebook Ireland Limited effective September 28, 2018.

225.   All drafts of the Network Bidding Agreement ("NBA").

226.   All Communications from or to Facebook, Inc. (currently, Meta Platforms, Inc.) and/or Facebook Ireland Limited or Amazon concerning the Network Bidding Pilot Program, the NBA or negotiations regarding the NBA, or any similar agreement with Amazon.

227.   All Documents analyzing, describing, evaluating, or studying the expected or realized effects of the NBA on the performance and/or outcomes of Final Clearinghouse Auctions or on any auction Metric.

228.   All Documents analyzing, describing, evaluating, or studying the expected or realized effect of the NBA on third-party bidders in Final Clearinghouse Auctions or on any Metric used to track, monitor, or evaluate third-party auction activity.

229.   All Documents analyzing, describing, evaluating, or studying the expected or realized effect of the NBA on Ad Tech competitors or any Metric used as a measure of competition.

230.   All Documents analyzing, describing, evaluating, or studying the effect of different expected or realized effects of the NBA on revenues or any other Metric.

231.   All Documents concerning any change of Your Algorithms and/or manual overrides of Your Algorithms to facilitate or implement the NBA.

232.   All Documents analyzing, describing, evaluating, or studying the effect of different auction timeouts in the Final Clearinghouse Auction on auction outcomes or any other Metric.

233.   All Documents concerning exceptions to or accommodations and variation of auction timeouts requested by Publishers or Advertisers and Your decisions whether to approve or reject such requests.

234.   All Documents analyzing, describing, evaluating, or studying the extent to which the NBA was or was not disclosed to any third party or reflecting any effort by You to prevent third parties from learning of its existence.

235.   All Documents analyzing, describing, evaluating, or studying any expected or realized competitive effect of the Network Bidding Pilot Program or the NBA in the Publisher Ad Server, Ad Exchange, Ad Network, Ad Buying Tools for Large Advertisers, or Ad Buying Tools for Small Advertisers markets.

236.   All Documents containing transactional data generated by or collected from Final Clearinghouse Auctions between 2013 and the present.

237.   All Documents analyzing, describing, evaluating, or studying the parameters applied to Final Clearinghouse Auctions, including any comparison of variations in such auction parameters.

238.   Documents sufficient to show any complaints submitted to You by bidders in the Final Clearinghouse Auction regarding the procedures or outcome of any auction.

AUCTION AND SALES DATA

239.   Documents sufficient to show what data You store concerning each of your Ad Tech Products, including all data fields, information about frequency of event data, number of observations aggregated in aggregate data and summary statistics, the quantity of data in bytes (or multiples thereof), descriptions of the format and nature of the storage of the data, and a description of how You transfer, query, and analyze this data in the normal course of business.

240.   All manuals, technical references, employee on-boarding or training materials, internal written discussions, wikis, data dictionaries, database schemas or other data-definition-

language materials, or other written materials that Your engineers use to document or communicate how to use the auction data or the code that generates that data.

241.   All reports, analyses, presentations, or other documents or communications concerning experiments planned or performed to study or simulate ad auctions.

242.   All Documents that relate to the implementation and/or Your evaluation of the effects on Your businesses, the market for Ad Buying Tools, Ad Exchanges or Publisher Ad Servers, or any of Your competitors or customers from the introduction of new products by You or any changes to any of Your products, including all data and logs arising from experiments or other quantitative analyses, including any online or offline experiment and live user testing performed to assess the impact of modifications to any AdTech Auction Mechanics, such as data used to compute the effects on AdX win-rates, revenues of Your products, ad prices, ad spend on Your Ad Buying Tools, Publisher pay-out and any Metric of impact on Your business and/or used for discussion or approval for the launch of the new product or modification and sufficient for identifying which cohorts all experiment participants were in and any Documents that explain how the experiment was set up and cohorts were chosen.

243.   All data concerning each display ad transaction processed by You through one or more stages of the Ad Tech Stack, including:

        a.   Transaction identification number (a unique identifier for cross-referencing);

        b.   Date and timestamp of transaction;

        c.   Publisher identity;

        d.   Advertiser identity;

        e.   Ad type (*e.g.*, static banner, interactive, expandable, etc.);

f.   Other ad features affecting pricing in any way;

g.   Ad price;

h.   Ad price type (*e.g.*, CPM, CPC, etc.);

i.   Total ad dollars (revenue);

j.   Ad Server Fee (by percentage and total dollars);

k.   The amount paid by the Advertiser (broken down by specific components, as applicable);

l.   The amount remitted to the Publisher (broken down by specific components, as applicable);

m.   The amount paid to any other third party for each service rendered or tool provided at each and every stage of the transaction in the Ad Tech Stack (broken down by specific components, as applicable);

n.   Ad Exchange / Network used;

o.   Ad Exchange / Network commission or fee (by percentage and total dollars);

p.   Ad Buying Tool used;

q.   Ad Buying Tool fee (by percentage and total dollars);

r.   Any other transaction associated with a specific cost or fee;

s.   Heading bidding indicator (if applicable);

t.   Data sufficient algorithmically to identify the rules of the auction (*e.g.*, how bidders qualify to bid; when they may bid; the form and meaning of bids; limits on their bids; whether header bidding, waterfall rules, last look, or other special rules applied; how ties are broken; and how final payments are computed from the bids);

u.   All bids submitted to the ad server or other entity in Your control acting as auctioneer ("auctioneer") for the auction or to any ad exchange or ad network that You control and that participated in the auction. Data for a bid should include information sufficient algorithmically to reproduce the auction results and understand the choices bidders made, including:

(1)   identifier of the bidder;

(2)   time of submission;

(3)   whether the auctioneer accepted the bid and if not, why not;

(4)   the total amount of the bid, including modifications, fees, and surcharges, that You consider when determining whether that bid is either a winning bid or is affecting the price paid by the winning bidder;

(5)   the source of the bid (*e.g.*, the identity of the ad exchange or ad network to which the bidder submitted the bid before the ad exchange or ad network forwarded it to the ad server);

(6)   order of the bid in relation to any rules, such as waterfall rules, or technical constraints that determine or influence the priority of bids within an auction;

(7)   the bidding options and auction information available to bidders at the time they submitted bids (*e.g.*, metadata about the impression for sale, permitted bid amount increments, and information about price floors);

(8)   if the auction was subject to any experiment or A/B testing, whether the bidder submitting the bid or the bid itself (as applicable) was in a treatment or control group and, if in a treatment group, what the treatment was;

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(9)   any bid-specific data that the applicable auction rules stipulated for use in breaking ties (*e.g.*, a random number that Your or other software attached to a bid);

     v.   Metadata about and parameters of the auction, including:

(1)   a non-anonymized identifier for the Publisher selling the Ad Impression;

(2)   the date and time that the auction began and ended;

(3)   the person, software platform, server, or other entity (and its ownership relations) acting as auctioneer for the auction;

(4)   characteristics of the ad impression for sale;

(5)   identify whether the user data used to inform impression characteristics, including quality, or Your buying tools' bidding strategies originated from user activity on the webpage of the Publisher corresponding to the impression being auctioned and whether the user data originated from a Publisher;

(6)   identify any impression characteristics, including proxies for impression quality available to AdX and other exchanges and ad networks;

(7)   whether the auction was subject to any experiment or A/B testing, and, if so, what the experiment or test was assessing;

(8)   if the auction was subject to waterfall rules, what the order of the waterfall was;

(9)   the floor or reserve price(s) for the auction.

     w.   Your identification or understanding of auction results, including:

(1)   the identity of the winning bid cross-referenceable to the bid data provided;

(2)   if the auction was subject to Your "Last Look", the identity of the bid that would have won but for Your Last Look;

(3)   the amount of the payment the winner was obliged to pay, along with the (cross-referenceable) identity of the bid or bids that set that price (*e.g.*, the second highest bid or combination of bids that determine the price in a second-price auction);

(4)   any fees, surcharges, or other consideration required of or paid by any parties other than the Advertiser who won the auction or the Publisher who sold the Ad Impression;

(5)   the amount you retained as payment (or "take") for each service rendered or tool you provided at each and every stage of the auction;

(6)   the amount you remitted to the Publisher that sold the ad impression;

(7)   whether any party to the transaction defaulted on its post-auction obligations;

(8)   whether the results of the auction were amended or vacated and, if so, why;

x.   All logs pertaining to the structured data otherwise provided;

y.   The amount, characteristics, and consideration given for each bid submitted by any participant (*e.g.*, date, type of ad, timeliness of submission, identity of submitting participant, identity of Ad Buying Tools, identity of publisher, identity of Ad Server, Header Bidding indicator, positioning of bid within line items in Ad Server, and rejection or failure to consider bid);

z.   The amount, characteristics, and consideration given for each bid

submitted by any participant (*e.g.*, timeliness of submission, identity of submitting participant, positioning of bid within line items in ad server, and rejection or failure to consider bid);

   aa. The amount of the winning offer or bid regardless of whether it is the actual ad price;

   bb. The amount of the price setting offer or bid (*e.g.*, the second-highest bid in a "second-price auction," the floor price if only one bid exceeded the floor, or the highest bid in a "first-price auction"); and

   cc. The floor price(s) for the Ad Impression.

244. Documents sufficient to show how any of the data responsive to Request No. 243 is or was made available to Publishers, Advertisers, Ad Exchanges, Ad Networks, or other DSPs, the specifics of which data is made available to Publishers, Advertisers, Ad Exchanges, Ad Networks, or other DSPs across time, as well as throughout a given auction (*e.g.*, when a Publisher requests bids, when an Ad Exchange solicits bids from Advertisers, and when an Advertiser submits bids, along with other phases of the auction).

245. Documents sufficient to show how and what of any of the data responsive to Request No. 243 is or was used for any future sales and auctions (*e.g.*, for any type of reallocation or "revenue sharing" program).

246. To the extent the measure of the Advertisers' offers and bids differed from the measure of the Publishers' payments (*e.g.*, where Advertisers bid on a cost-per-click basis but Publishers receive payment on a cost-per-mille basis), Documents sufficient to show the conversion mechanism or Algorithm used to measure each such transaction.

247. Documents indicating the win rates of non-Google Ad Buying Tools on AdX, and of Google Ad Buying Tools on AdX.

248.   Documents concerning what dashboards and tools You have available, to access and view data concerning Your Ad Tech Products.

249.   Documents concerning what methodologies You have used to access and view data for any changes to Your Ad Tech Products, including any industry, market, and economic impact studies.

250.   Documents concerning how and what in Your data sources, tables, or logs relating to Ad Tech Products You can modify or adjust to receive and store data, such as for the purposes of sampling and testing.

251.   All Documents concerning Your tracking, collecting, analysis and/or use of competitor data, including competitors' customer and client information and lists and competitors' information or data regarding Users.

252.   All Documents concerning Your use of tracking technologies connected with ad auctions and related processes, such as Google Analytics, regardless of whether the tracking technologies are used to track Your products, or those of competitors.

253.   All Documents concerning complaints by Publishers concerning discrepancies or inaccuracies with unique website visitors and/or advertising revenue metrics as reported by Google Analytics.

254.   All Documents that discuss, explain, or otherwise concern the data You collect about Publishers' websites and profiles of their users, including product roadmaps, API documentation, interface documentation, interface specification, code documentation, product architecture schematics, and presentations. For example, but without limitation, this request pertains to audience profiles for the Publisher's audience, reach, engagement, Publisher profiles, Ad Inventory assessments or evaluations or ratings, Publisher or inventory quality scores,

ratings, user or audience demographics, affinities, or other segmentation information or

evaluations that You create or maintain about the website users.

255.   A Clone of all data files that You use to collect, organize, or otherwise prepare Ad

Requests and Bid Requests received from Daily Mail in the United States, Canada, the United

Kingdom, Ireland, New Zealand, and Australia, since December 16, 2016.

256.   A Clone of all data files that You use to collect, organize, or otherwise prepare

Bid Responses transmitted to Daily Mail in the United States, Canada, the United Kingdom,

Ireland, New Zealand, and Australia, including data files that transmit or contain all bid prices

received from all responses to Daily Mail's Bid Requests, since December 16, 2016.

257.   A Clone of all Data Files that You use to track, analyze, or otherwise review

organic search results and search traffic, for the six-month period before and the six-month

period after Your release of all Core Algorithm Updates on or around (a) September 24, 2019,

(b) June 3, 2019, (c) March 12, 2018, and (d) November 5, 2017.

SOURCE CODE

258.   Documents sufficient to identify the Source Code and Algorithms used by Your

Ad Tech Products in digital ad sales and auctions.

259.   All Documents concerning Your development, maintenance, deployment, use,

and/or operation of any past or present Ad Tech System, including manuals, presentations,

architecture diagrams, product requirement documents, data flow diagrams, programming

guides, API references, protocol descriptions, interfaces, declarations, design specifications,

experiments, quantitative analyses, launch reports, progress reports, status reports, onboarding

materials, and/or training materials.

260.   A Clone of each Source Code Repository concerning:

a.   Each of Your past, present, and proposed Ad Tech Products and Ad Tech

Auction Mechanics;

b.   Your receipt of Ad Requests, including the processing and/or storage of

the contents of Ad Requests, including a Clone of each Source Code Repository, including the

Source Code it contains, that You use or have used to receive or otherwise process Ad Requests

from Daily Mail in the United States, Canada, the United Kingdom, Ireland, New Zealand, and

Australia, since January 1, 2014;

c.   The transmission of messages, information, or data from any of Your past,

present, or proposed Ad Tech Products to any Publisher Ad Server;

d.   The transmission of Bid Requests in response to the receipt of an Ad

Request, including Source Code related to the creation, transmission, and storage of such Bid

Requests, including a Clone of each Source Code Repository, including the Source Code it

contains, that You use or have used to receive or otherwise process Bid Requests from Daily

Mail in the United States, Canada, the United Kingdom, Ireland, New Zealand, and Australia,

since January 1, 2014;

e.   The receipt of Bid Responses in response to Bid Requests, including a

Clone of each Source Code Repository, including the Source Code it contains, that You use or

have used to transmit or otherwise process Bid Responses transmitted to Daily Mail in the

United States, Canada, the United Kingdom, Ireland, New Zealand, and Australia, since January

1, 2014;

f.   Conducting an Ad Auction, including Source Code related to the

determination of the winner, storage of information concerning bids, storage of information

concerning the winning bidder, and the transmission of information concerning the result of the

Ad Auction to others (including Advertisers and Publishers);

g.   Dynamic alterations to the conditions or circumstances of an Ad Auction,

including Source Code relating to alterations of bid floors, bid weights, and bid time outs; and

h.   Processing and responding to commands, methods, and requests

associated with Google Publisher Tags as described at

https://support.google.com/admanager/answer/181073.

261.   The database configuration (including schemas, procedures, functions, and

triggers) for all databases: (a) used to store data relating to Ad Requests and their corresponding

bids to display ads on web pages; and (b) accessed during the process of responding to an Ad

Request, including databases containing Behavioral Data concerning the viewer of a web page.

262.   A Clone of all Source Code that implements or effectuates Dynamic Allocation,

Enhanced Dynamic Allocation, Exchange Bidding, Open Bidding, Unified Auction, Optimized

Competition, Unified Pricing Rules, and/or First Look.

263.   All Documents concerning any advantages to You or Your Ad Tech Products

arising from Your access to or use or accumulation of Behavioral Data, including collection,

storage, and use of GAIA data and the operation of Dremel or other log analysis tool.

264.   All Documents concerning any advantages to You or Your Ad Tech Products

arising from Your access to or use or accumulation of information relating to past bidding

behavior of bidders on an Ad Auction You conduct, including Exchange Bidding and Open

Bidding and including any documentation related to the availability of bid-related information

for Publishers, Advertisers, and Ad Exchanges at each stage of the auction and Advertisers'

valuation of Ad Impressions.

265.   Documents concerning how Your Ad Tech Products use, modify, reflect, or determine the following data as inputs to Your Source Code and Algorithms, including:

a.   The number of bidders in sales and auctions;

b.   The timing of all bids and in sales and auctions;

c.   The sequencing and partitioning of all sales and auctions, involving any participants, concerning the same Ad Impression;

d.   The amount, characteristics, and consideration given for each bid submitted by any participant (*e.g.*, timeliness of submission, identity of submitting participant, positioning of bid within line items in ad server, and rejection or failure to consider bid);

e.   The amount of the winning offer or bid;

f.   The amount of the price setting offer or bid (*e.g.*, the second-highest bid in a "second-price auction," the floor price if only one bid exceeded the floor, or the highest bid in a "first-price auction");

g.   The floor price(s) for the Ad Impression;

h.   The identity of (i) the winning bidder and (ii) the Ad Exchange, Ad Network, or other source of the bid;

i.   The amount submitted and paid by the winning bidder and/or by the Ad Exchange, Ad Network, or other source of the offer or bid;

j.   Any modifications by You of the amount to be paid to Publishers such that You retained a portion of the winning bidder's payment that differed in any way from the agreed-upon rate or amount;

k.   The amount You retained as payment (or "take") for each service rendered or tool provided by You at each stage of the transaction;

l.   The amount You charged the Advertiser in connection with each Ad Impression;

m.   The amount You remitted to the Publisher in connection with each Ad Impression.

266.   All Documents concerning Your calculation(s) of and/or Algorithm(s) concerning any "temporary CPM or 'opportunity cost' that Ad Manager calculates automatically" to determine the winning bid as between guaranteed line items and Open Bidding and/or remnant inventory in Dynamic Allocation and Enhanced Dynamic Allocation.

267.   All Documents concerning manual overrides of Your Algorithms concerning any Ad Requests, Ad Tech Products, Ad Tech Auction Mechanics, Advertiser Ad Server, Demand Side Products, Demand Side Platforms, Direct Sales, Publisher Ad Servers, Supply Side Platforms, and/or Unified Auctions.

268.   A Clone of each Source Code Repository, including the Source Code it contains, used to design and implement all Core Algorithm Updates released on or around (a) September 24, 2019, (b) June 3, 2019, (c) March 12, 2018, and (d) November 5, 2017.

FINANCIAL DOCUMENTS AND DATA

269.   Documents sufficient to show all prices, price lists, pricing plans, and pricing policies for Your Ad Tech Products.

270.   All Documents concerning Your pricing strategies and pricing analyses for Your Ad Tech Products, including financial budgets, projections, revenue statements, documents detailing the number of purchase, registrations and/or subscriptions, or related studies, presentations, or reports concerning Your Ad Tech Products prepared by or for You on a regular or recurring basis (including on a monthly, quarterly, or annual basis).

271.   Each financial statement, profit and loss statement, profitability report, cost center report, and any other financial report concerning Your Ad Tech Products prepared by or for You on a regular or recurring basis (including on a monthly, quarterly, or annual basis).

272.   Documents sufficient to show all forms of Your contracts with customers concerning Your Ad Tech Products.

PRIVACY

273.   Documents sufficient to show Your privacy policies concerning Your Ad Tech Products, including all changes made to those policies and the justifications, reasoning or basis for any changes to Your Privacy Policies.

GOVERNMENT INQUIRIES, INVESTIGATIONS AND ACTIONS

274.   To the extent not already produced, all Documents You produced in response to any investigations or inquiries concerning display advertising by United States or foreign governmental authorities and correspondence with the same, including any such investigation or inquiry by:

a.   The United States Department of Justice ("DOJ"), including all documents produced to DOJ in connection with *United States v. Google LLC*, No. 1:23-cv-00108 (E.D. Va.), whether produced in response to DOJ's pre-suit investigation of monopolization, attempted monopolization, monopoly maintenance, and/or contract, combination, or conspiracy in restraint of trade or commerce by You in digital advertising markets, or related products and services; produced in discovery in *United States v. Google*, No. 1:23-cv-00108 (E.D. Va.); or otherwise produced;

b.   The Federal Trade Commission;

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       c.   The United States House Committee on the Judiciary, Subcommittee on Antitrust, Commercial and Administrative Law;

       d.   The United States Senate Committee on the Judiciary, Subcommittee on Antitrust, Competition Policy, and Consumer Rights;

       e.   The European Commission's investigations, inquiries, or other actions concerning Your digital advertising-related business practices, including Case No. 40411—Google Search (AdSense), Case No. 39740—Google Search (Shopping), Case No. AT.40670—Google Ad Tech, Case No. 40099—Google Android, Case No. 40774 — Google Facebook Open Bidding Agreement, and any other formal or informal inquiry or investigation irrespective of whether such inquiry or investigation has received an official matter or case number;

       f.   The United Kingdom's Competition and Markets Authority in connection with its "Online Platforms and Digital Advertising Market Study";

       g.   The Australian Competition and Consumer Commission in connection with its "Digital Platforms Inquiry";

       h.   The Italian Competition Authority;

       i.   The French Competition Authority (Autorité de la concurrence).

275.   A copy of all final orders, decisions, or statements issued by United States or foreign governmental authorities concerning the investigations or inquiries for which you produced Documents responsive to Request for Production No. 274.

276.   A copy of all transcripts of sworn statements, depositions, or interviews conducted in relation to any investigation or inquiry for which You produced Documents responsive to Request for Production No. 274.

277.   To the extent not already produced, unredacted copies of all (1) pleadings, (2) dispositive motion briefing, (3) written discovery, (4) expert disclosures and reports, and (5) transcripts of depositions in the following litigations:

      a.   *State of Texas, et al. v. Google LLC*, No. 4:20-cv-957-SDJ (E.D. Tex.);

      b.   *United States, et al. v. Google LLC*, No. 1:20-cv-03010-APM (D.D.C.).

278.   All Documents and Communications produced in *United States v. Google LLC*, No. 20-cv-03010 (D.D.C.), and *State of Colorado v. Google LLC*, No. 20-cv-03715 (D.D.C.), concerning all Core Algorithm Updates released on or around (a) September 24, 2019, (b) June 3, 2019, (c) March 12, 2018, and (d) November 5, 2017.

279.   All Documents, Communications, and any other materials You produced in *United States v. Google LLC*, No. 20-cv-03010 (D.D.C.), in response to the United States' Second Request for Production Nos. 2, 3(c), 4, 5, 6, 8, as excerpted at ECF Nos. 124-1 and 124-2.

280.   All GDN Referrer Data You produced in *United States v. Google LLC*, No. 20-cv-03010 (D.D.C.).

281.   All Documents, Communications, and any other materials You produced in *United States v. Google LLC*, No. 20-cv-03010 (D.D.C.), in response to the United States' Eleventh Request for Production No. 2, as excerpted at ECF No. 352, at 29, n. 20.

GOOGLE GROUPS

282.   Documents sufficient to identify all Google Groups and their respective members concerning the Ad Tech Stack.

283.   All Documents held by or accessible to each of the following Google Groups and communications sent to, from, or on behalf of each of the following Google Groups:

a4a-cam, a4a-discuss, admob-jedi, ads-auction, adwords-amp, adwords-amp-xfn, adx-auction, adx-buyside, adx-buyside-all, adx-buyside-comms, adx-call-reports, adx-comm, adx-drs, adx-dynamic-price, adx-pm, adx-sellside-all, amalagm-team, amalgam-core-leads, amalgam-leads, amalgam-steering, americas-mweb-community, amp-a4a-eng, amp-ads-analysis, amp-ads-analytics-eng, amp-ads-comms, amp-ads-integration, amp-adwords-discuss, amp-ais-wg, amp-analytics-internal, amp-api-eng, amp-buyside-eng, amp-core-leadership, amp-CURLS, amp-curlsv2, amp-dashboard-users, amp-data, ampersand, ampersand-metrics, ampersand-updates, amp-global, amp-harmony, amphtml-all, amphtml-core-eng, amphtml-core-pm, amphtml-discuss, amphtml-eng, amphtml-eng-github, amphtml-escalations, amphtml-outreach, amphtml-pm, amphtml-prod, amphtml-validation, amp-indexing-team, amp-ptms, amp-rev, amp-search, amp-tech-support, amp-viewer, amp-viewer-eng, amp-webresults, aog-amp-actions, auctions, bid-landscapes, bidmanager-all, bidmanager-docs, bidmanager-eng, bidmanager-leads, bidmanager-pm, bidmanager-team, btc-eng, cronut, cronut-core, dev-partners-gtm-amp, drx-all, drx-all, drx-amp, drx-amp-eng, drx-core-pm, drx-documentation, drx-eng-mgrs, drx-jedi, drx-jedi-eng, drx-notes, drx-pgm, drx-pm, exchange-buy-side-all, google-ad-exchange-eng, gtech-partners-amp, hbobservatory, integration-gpp, jedi-beta, jedi-buy, jedi-comms, jedi-pricing, jedi-tiger-team, modena, modena-volt, open-bidder, popfeeds-eng, pricing, project-magnolia, project-rey, pub-tags-team, rev-team, sc-amp, sell-performance, shopping-amp, stories-amp, stream-eng

DOCUMENTS CONCERNING INDIVIDUAL ACTION PLAINTIFFS

284.   All Communications between You and Daily Mail, or You and any Direct Action

Plaintiff, since January 1, 2013.

285.   All Documents and Communications referencing Daily Mail and/or any Direct

Action Plaintiff, or concerning any Communication with Daily Mail and/or any Direct Action

Plaintiff, since January 1, 2013.

286.   All Documents and Communications concerning Your contractual relationships

relating to Ad Tech Products with Daily Mail and/or any Direct Action Plaintiff since January 1,

2013, including: draft and executed contractual language, any changes to or suspensions of the

terms thereof or rights thereunder, or any proposed or contemplated changes to or suspensions of

the terms thereof or rights thereunder.

287.   All Documents and Communications analyzing or discussing Daily Mail's and/or

any Direct Action Plaintiff's use of Your Ad Tech Products, or products or services that compete

with Your Ad Tech Products, since January 1, 2013.

288.   All correspondences, communications, emails, letters, memoranda, notes,

summaries, presentations, and documents concerning the purpose, creation, implementation, and

administration of the Google News Showcase and/or Google News Initiative, including its

Digital News Initiative, Project Oasis, and Compass Experiment.

289.   All correspondences, communications, emails, letters, memoranda, notes,

summaries, presentations, and documents concerning any lobbying efforts and/or opposition

concerning the Journalism Competition and Preservation Act.

290.   All correspondences, communications, emails, letters, memoranda, notes,

summaries, presentations, and documents concerning any lobbying efforts and/or opposition

concerning passage of the News Media Bargaining Code in Australia and the News Media

Bargaining Code in Australia.

291.   All documents, papers, studies, analysis, equations, evaluations, investigations, or

assessments concerning the value and benefits of news content to You and Your products and

platforms, including Your creation of a walled garden on the internet for news content.

292.   All correspondences, communications, emails, letters, memoranda, notes,

summaries, presentations, and documents concerning online advertising during news spikes and

peak times in the news cycle, including all documents concerning any and all overrides and/or

updates of Your Algorithms (manual or otherwise), and all documents concerning overriding

and/or bypassing the waterfall, and the use and effects of Dynamic Allocation and Enhanced

Dynamic Allocation during news spikes and peak times in the news cycle.

293.   A copy of all agreements, contracts, and/or understandings, including advertising

revenue-sharing agreements and/or content licensing agreements, relating to payment,

compensation, and consideration for news content, together with all documents relied upon

and/or concerning how the pricing terms and/or compensation was set.

ARBITRATION ISSUES

294.   All Documents related to arbitration agreements that You contend apply, or ever

applied, to any dispute or claim of Advertisers, including all of Your Terms of Service that

include any purported agreement to arbitrate with Advertisers.

295.   All Documents related to the method by which You contend an arbitration

agreement was formed between You and any Plaintiff, including all Documents related to any

Plaintiff's acceptance of any Terms of Service with a purported arbitration agreement, and

screenshots showing how any such Terms of Service were delivered or made available to any such Plaintiff.

296.   Documents sufficient to show how many times each Advertiser Plaintiff logged in to Google Ads or AdWords since September 1, 2017.

297.   All briefs, declarations, and attachments thereto in support of or in opposition to motions to enforce any arbitration agreements that You contend apply, or ever have applied, to Advertisers, as well as orders on such motions, with the exception of such filings in *In re Google Digital Advertising Antitrust Litigation*, N.D. Cal. No. 5:20-cv-03556-BLF.

ADDITIONAL DOCUMENT REQUESTS

298.   Documents sufficient to explain the policies and procedures referred to as "Smart Throttling" or the potential or actual impact of those policies and procedures, including on Your Metrics, Your Competitors' Metrics, or the Metrics of Advertisers or Publishers.

299.   All emails, attachments, correspondences, communications, letters, memoranda, notes, summaries, presentations, and documents emailed to or from competition-questions@google.com.

300.   All Documents and correspondence concerning any subpoenas or informal requests for information made by You to any third parties in connection with this Action, including any draft or final declarations or affidavits, and any Documents provided to You by such third parties.

301.   All Documents and Communications concerning deletion and/or failure to preserve informal communications and chats in relation to any actual or potential antitrust action.

DATED: January 27, 2023

/s/ W. Mark Lanier   /s/ Ashley Keller
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CERTIFICATE OF SERVICE

I, Walter W. Noss, hereby certify that on January 27, 2023, I caused the foregoing

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